United Nations Development Programme
Country: Myanmar

PROJECT DOCUMENT

Project Title: **Strengthening Sustainability of Protected Area Management in Myanmar**

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: 1. Growth and development are inclusive and sustainable incorporating productive capacities that create employment and livelihoods for the poor and excluded

Outcome Indicator: 1.5. Hectares of land that are managed sustainably under a conservation, sustainable use or access and benefits sharing regime

Expected CP Outcome(s): Reduced vulnerability to natural disasters and climate change, improved environmental and natural resource management, and promotion of energy conservation through access to affordable and renewable energy, particularly in off-grid local communities

Expected CP Output(s): Enhanced institutional and communities' capacity for environmental conservation and use of natural resources

Executing Entity: Ministry of Environmental Conservation and Forestry

Implementing Entity: Wildlife Conservation Society

Brief Description

Myanmar is the largest country in mainland South-East Asia, with significant forest, freshwater, coastal and marine ecosystems. Because of its very wide variation in latitude, altitude and climate, and location at the convergence of four major floristic regions, Myanmar supports a high diversity of habitats, and is extremely rich in plant species. Available information on species diversity and endemism indicates that Myanmar supports extraordinary plant and vertebrate diversity. The country includes all or part of fourteen WWF Global Ecoregions. However, detailed baseline data are still lacking for many taxonomic groups, and new species for science are still being regularly discovered. Since the late 1990s, destruction and degradation of Myanmar's natural habitat has increased, primarily due to logging and agricultural conversion as the country increasingly engaged with the outside world for economic development. These pressures are likely to increase dramatically following recent political changes that facilitate foreign investment and trade.

The long-term vision of the project is for Myanmar to have a robust, representative and effectively managed terrestrial protected area system, which is effectively integrated into broader landscape-level land use planning. This project aims to secure important biodiversity areas to be included in the expanded PA system and to strengthen the overall system while at the same time raising the profile of protected areas within the national and state level development planning context. However, the country faces number of **barriers** for achieving this, namely weak systematic and institutional capacity to plan and manage the expanded national PA system, and insufficient management capacity and motivation at the PA level to manage local threats and achieve conservation outcomes.

The **objective** of the proposed project is **to strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing.** This will be secured through two project components. Myanmar is experiencing a rapid boom in development after over 50 years of relative isolation. This unique period in history allows a tremendous opportunity to benefit the global environment by addressing local, national, and global environmental challenges and to promote sustainable livelihoods and biodiversity conservation in Myanmar. The project plans to strengthen PA management in two Priority Conservation Corridors identified by the NBSAP, identify sustainable funding opportunities for four focal PAs in those corridors and integrate PA management and finance into broader state and national level development planning. Lessons from focal PAs will increase the overall effectiveness of the national PA system.

In the baseline situation, a lack of capacity and resources, insufficient political support and an inability to expand management systems will mean that threats to the PAs and their associated biodiversity and ecosystem services will continue to grow. Amidst the frenzy of fast economic development, substantial amounts of important biodiversity will be lost and degraded in coming decades. **In a scenario enabled by the GEF**, systemic and institutional barriers to improved PA management and sustainable financing in Myanmar will be removed at the national, state and site levels. The first stage of the PA expansion will be achieved with PAs expanded to at least 10% of the national terrestrial area, better representing the globally significant ecosystems within the country. Financing for the PA system will be improved using economic tools and by increasing the government investment as well as establishing new revenue streams. Capacity of the Forest Department will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, SMART patrolling and law enforcement monitoring system. On the ground, PA management will be

significantly improved at the four demonstration PAs in two high priority conservation corridors. The lessons learned from these PAs will be used to increase capacity nationwide by drawing on such successful practices and mainstreaming those into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centres (CFDTC) to train Forest Department staff in protected area management. Opportunities at the site level will determine pilots to sustainably finance their operations. These ground level activities will be used to raise the awareness of relevant decision makers concerning the PA network and ensure that all PAs in the country are integrated into national level land-use planning.

The project's two components will result in the following main outcomes:

Component 1:

- Improved institutional capacity of the MOECAF for PA system planning and management
- Core operation of the existing national PA system in Myanmar covering 3,788,697 ha strengthened, leading to reduction of threats from forest loss, encroachment and poaching
- A national PA system financing strategy is developed and operationalised, articulating PA financing needs and providing for concrete steps for meeting the financing needs. The national development plan integrates the PA system financing strategy.
- 100% increase in budget allocated to the protected areas in real terms compared to the baseline of US$ 750,000[1] per year.

Component 2:

- Improved management effectiveness of individual PAs covering 2,604,000 ha – Hukaung Valley Wildlife Sanctuary (1,737,300 ha), Hkakaborazi National Park (381,200 ha), Hponkanrazi Wildlife Sanctuary (270,400 ha) and Htamanthi Wildlife Sanctuary (215,100 ha).
- Reduction of threats at the local level through improved patrolling and enforcement, community participation, and planning measures to reduce external threats
- Improved habitat conditions at local level indicated by stable forest cover and reduced encroachment

The project's **global environmental benefits** derive from improved management of an expanded terrestrial PA network in Myanmar covering 6,765,500 ha,in the largest and most heavily forested country in South-East Asia with 14 WWF Global Ecoregions within the territory. The strengthened PA network will provide improved protection for globally significant populations of key species, including Tiger, Asian Elephant, and primates, as well as over 80% of the birds found in South-East Asia and some of the most highly diverse plant communities in the world.

Programme Period:	60 months
Atlas Award ID:	00083188
Project ID:	00091797
PIMS #	5162
Start date:	1 July 2015
End Date	30 June 2020
Management Arrangements	CSO IM
PAC Meeting Date	21 Oct 2014

Total resources required (total project funds)	**$23,923,697**
Total allocated resources	
Regular (UNDP TRAC)	$6,350,000
Non-Core (to be mobilized)	$5,650,000
GEF	$6,027,397
Other (partner managed resources)	
o Government	$4,646,300
o NGOs	$1,250,000
o Other	

Office of the Director General Forest Department NAYPYITAW Myanmar

Agreed by (Government):
Dr. Nyi Nyi Kyaw, Director General, FD — 23 JUN 2015 — Date/Month/Year

Agreed by (Implementing Entity):
CMPOORE, REGIONAL DIRECTOR, WCS — 18 JUN 2015 — Date/Month/Year

Agreed by (UNDP):
Toily Kurbanov, Country Director, UNDP Myanmar — 18 JUN 2015 — Date/Month/Year

[1] Based on the exchange rate of 800 kyat = 1 US$.

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Table of Contents

List of Figures and Tables

Acronyms

ADB	Asian Development Bank
APM	Adaptive Patrol Management
APR	Annual Progress Report
ARCBC	ASEAN Regional Centre for Biodiversity Conservation
ARR	Annual Review Report
ASEAN	Association of South East Asian Nations
AWP	Annual Work Plan
BANCA	Biodiversity and Nature Conservation Association (Myanmar NGO)
BD	Biodiversity
BTOR	Back To Office Report
CBD	Convention on Biological Diversity
CDR	Combined Delivery Report
CFDTC	Central Forestry Development Training Centre
CI	Conservation International
CITES	Convention on International Trade in Endangered Species
CPAP	Country Programme Action Plan
CR	Critically Endangered (IUCN red list category)
CSO	Civil Society Organization
CTA	Chief Technical Advisor
DoF	Department of Fisheries
EA	Executing Agency
ECD	Environmental Conservation Department
EIA	Environmental Impact Assessment
EN	Endangered (IUCN red list category)
ESIA	Environmental and Social Impact Assessment
EU	European Union
FAO	Food and Agriculture Organization of United Nations
FD	Forest Department
FFI	Fauna and Flora International
FREDA	Forest Resource Environment Development and Conservation Association
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographical Information System
Ha	Hectare
IA	Implementing Agency
IBA	Important Bird Area
IAS	Invasive Alien Species
IUCN	International Union for the Conservation of Nature
IW	(Project) Inception Workshop
KBA	Key Biodiversity Area
KNU	Karen National Union
LEAP	Law Enforcement Action Plan
LEM	Law enforcement monitoring
M&E	Monitoring and Evaluation
MBCIV	Myanmar Biodiversity Conservation Investment Vision
MEA	Multilateral Environmental Agreement
METT	Management Effectiveness Tracking Tool
MOECAF	Ministry of Environmental Conservation and Forestry

MOF	Ministry of Finance
MoU	Memorandum of Understanding
NBSAP	National Biodiversity Strategy and Action Plan
NEX	National Execution
NGO	Non-Governmental Organization
NP	National Park
NPD	National Project Director
NR	Nature Reserve
NT	Near-threatened (IUCN Red List category)
NTRP	National Tiger Recovery Plan
NWCD	Nature and Wildlife Conservation Division (Forest Department)
PA	Protected Area (6 IUCN categories including nature reserves)
PB	Project Board
PBM	Project Board Meeting
PIF	Project Identification Form (for GEF)
PIMS	Project Information Management System
PIR	Project Implementation Review
PM	Project Manager
PMO	Project Management Office
PPF	Protected Public Forests
PPG	Project Preparation Grant (for GEF)
PPR	Project Progress Report
PSDiv	Planning and Statistics Division (Forest Department)
PoWPA	Programme of Work on Protected Areas (of CBD)
Ramsar	Ramsar Convention on Wetlands of International Importance
RCU	(UNDP-GEF) Regional Coordinating Unit
REDD	Reducing Emissions from Deforestation and forest Degradation (UN)
REDD+	REDD plus the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
RTA	Regional Technical Advisor (of UNDP)
SEA	Strategic Environmental Assessment
SMART	Specific, Measurable, Achievable, Relevant and Time-bound (indicators)
SMART	Spatial Monitoring and Reporting Tool
SO	Strategic Objective
SP	Strategic Programme
SRF	Strategic Results Framework
TAGPA	Technical Advisory Group on Protected Areas
TCL	Tiger Conservation Landscapes
TOR	Terms of Reference
TRDD	Training and Research Development Division (Forest Department)
UN	United Nations
UNDP	United Nations Development Programme
UNDP-CO	UNDP Country Office
UNDP EEG	UNDP Environment and Energy Group
UNFCC	United Nations Framework Convention on Climate Change
UNDAF	United Nations Development Assistance Framework
UNEP	United Nations Environment Programme
US$	United States Dollar
VU	Vulnerable (IUCN Red List Category)
WCS	Wildlife Conservation Society
WS	Wildlife Sanctuary
WWF	World Wide Fund for Nature
Y1, Y2, etc.	Year 1, Year 2 , etc.

SECTION I: Elaboration of the Narrative

PART I: Situation Analysis

INTRODUCTION

1. The largest country in mainland South-East Asia, Myanmar is a regional priority for biodiversity conservation. Due to the combination and interaction of geography, topography, and climate, Myanmar has a rich variety of habitats and ecosystems, including 14 terrestrial ecoregions identified by WWF[2]. The country supports 233 globally threatened species including 37 critically endangered and 65 endangered species[3]. The country also contains large expanses of species-rich and globally threatened ecosystems such as lowland tropical forests and mangrove ecosystems that are critically threatened elsewhere in the region.

2. Rich in teak, minerals, oil and gas, Myanmar was one of the more prosperous countries in the region in the early 20th Century. However, decades of state socialism and sanctions reduced the state to an economically depressed and politically isolated country. In recent years, the country's efforts at political and economic reform have resulted in closer relations and rapidly growing economic investment from neighbours and developed nations, which will undoubtedly entail fast-paced exploitation of natural resources[4]. Within a context of weak regulatory capacity and inadequate environmental safeguards, such rapid economic development will have far-reaching negative implications for threatened species, ecosystems and dependent human communities[5].

3. Arising from this scenario, threats impacting Myanmar's biodiversity and protected areas (PA) system include the degradation and loss of forest ecosystems due to commercial logging for timber[6], agricultural expansion, conversion of forest to rubber and oil palm plantations and shifting cultivation[7]. Wildlife hunting both for international trade and local consumption is highly organized, widespread and increasing, especially due to Myanmar's long permeable border with China.Myanmar is among the South-east Asian countries that act as major sources of wildlife in trade, the trade involving a wide variety of native species, which, in many cases, are declining as a result of unsustainable, and often illegal, harvest[8,9,10,11,12]. Rivers and wetlands are threatened by alien species invasion, pollution from

[2]Wikramanayake, E.; Dinerstein, E.; Loucks, C. J.; Olson, D. M.; Morrison, J.; Lamoreux, J.; McKnight, M.; Hedao, P. 2002 Terrestrial ecoregions of the Indo-Pacific: a conservation assessment. Island Press. Washington D.C.
[3]Wildlife Conservation Society (WCS). 2012. Myanmar BiodiversityConservation Investment Vision. Yangon, Myanmar: WildlifeConservation Society.
[4]Schmidt, C. 2012. As isolation ends, Myanmar faces new ecologicalrisks. Science 337: 796–797.
[5]Webb, E.L., J. Phelps, D.A. Friess, M. Rao, and A.D. Ziegler. 2012.Environment-friendly reform in Myanmar. Science 336: 295.
[6]Woods, K., and K. Canby. 2012. Baseline Study 4. Myanmar:Overview of Forest Law Enforcement, Governance and Trade.Forest Trends. Retrieved May 23, 2013, from http://foresttrends.org/publication_details.php?publicationID=3159.
[7]National Commission for Environmental Affairs. 2009. MyanmarNational Environmental Performance Assessment Report, ADBand UNEP, 323 pp. Retrieved May 23, 2013, from http://www.gms-eoc.org/resources/myanmar-epa-report.
[8]Platt, S.G., Kalyar & Ko, W.K. (2000) Exploitation and conservation status of tortoises and freshwater turtles in Myanmar. *Chelonian Research Monographs*,**2,** 95-100.
[9]Shepherd, C.R. (2002) *The Trade of Elephants and Elephant Products in Myanmar*. TRAFFIC International, Cambridge, U.K

mining activities, river flow modification, and overexploitation of fisheries[13]. Dams are an increasingly important threat to aquatic systems and species. Overall, rapid economic growth is expected to increase the pressures on natural resources in Myanmar.

4. The PA system has been substantially neglected and under-financed and its governance remains weak as a result of as the country's history of political isolation, associated international economic sanctions and internal conflicts. Thus it has been affected by all the threats described above and is limited in its ability to effectively conserve biodiversity due to a number of additional factors related to size, geographic representation, inadequate management capacity, weak policy, and regulatory framework[14,15]. Further, the PA system is biogeographically incomplete and coverage of certain ecosystems such as limestone caves, inland wetlands, grasslands, estuaries, mangrove, and marine habitats is extremely limited throughout the country, requiring special attention to be placed on the future conservation of these ecosystems[16].

5. Significant technical and financial capacity constraints occur within the main Government institutions responsible for conserving biodiversity within PAs. For instance, the Nature and Wildlife Conservation Division (NWCD) of the Forest Department within the Ministry of Environmental Conservation and Forestry (MOECAF) has insufficient financial, human, and material resources to fulfill its mandate to manage PAs[17]. The regulatory framework for environmental protection is weak in both design and implementation[18] and the dearth of comprehensive land use policies is a critically important deficit. Further, the lack of adequate environmental safeguards is a key concern for the country's biodiversity within a context of impending economic development that will inevitably involve large-scale extraction of natural resources within and beyond the PA system[19].Thus, without GEF investment in the proposed project, a lack of capacity and resources, insufficient political support and an inability to expand management systems will mean that threats to the PAs and their associated biodiversity and ecosystem services will continue to grow. Amidst the frenzy of fast economic development, substantial amounts of important biodiversity are likely tobe lost and degraded in coming decades.

6. With support from GEF, the project will remove systemic and institutional barriers to improved PA management and sustainable financing in Myanmar at the national, regional and site levels. The first stage of the PA expansion will be achieved with PAs expanded to at least 10% of the national terrestrial area, with more complete representation of the globally

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[10]Shepherd, C.R. & Nijman, V. (2008b) *The wild cat trade in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
[11]TRAFFIC (2008) *What's Driving the Wildlife Trade? A Review of Expert Opinion on Economic and Social Drivers of the Wildlife Trade and Trade Control Efforts in Cambodia, Indonesia, Lao PDR, and Vietnam*. World Bank, Washington D.C.
[12]Nijman, V. (2010) An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation*,**19,** 1101-1114.
[13]Allen, D.J., S. Molur, and B.A. Daniel. 2010. The status anddistribution of freshwater biodiversity in the Eastern Himalaya.Cambridge and Gland: International Union for Conservation ofNature (IUCN) and Coimbatore, India: Zoo OutreachOrganisation.
[14]Rao, M., A. Rabinowitz, and S.T. Khaing. 2002. Status review of theprotected area system in Myanmar, with recommendations forconservation planning. Conservation Biology 16: 360–368.
[15]Tordoff, A.W., J.C. Eames, K. Eberhardt, M.C. Baltzer, P. Davidson,P. Leimgruber, Uga, and Aung Than. 2005. Myanmar investmentopportunities in biodiversity conservation. Yangon, Myanmar:Birdlife International.
[16]Myint Aung, 2007. Policy and practice in Myanmar's protected areasystem. Journal of Environmental Management 84: 188–203.
[17]Myint Aung, 2007. Ibid.
[18]Gutter, P. 2001. Environmental Law in Burma, Legal Issues onBurma Journal, Burma Lawyers Council, Issue Number 9.
[19] NCEA. 2009. Ibid; Webb, E.L., J. Phelps, D.A. Friess, M. Rao, and A.D. Ziegler. 2012. Ibid.

significant ecosystems within the country. Financing for the PA system will be improved using economic tools and by increasing government investment as well as establishing new revenue streams. Capacity of the Forest Department will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, integrated patrolling and law enforcement monitoring system. On the ground, PA management will be significantly improved at the four demonstration PAs located in two high priority conservation corridors. The lessons learned from these PAs will be used to increase capacity nationwide by drawing on successful practices and mainstreaming them into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centre (CFDTC) to systematically train Forest Department staff. Opportunities at the site level will determine pilots to sustainably finance their operations. These ground level activities will be used to raise the awareness of relevant decision makers concerning the PA network and ensure that all PAs in the country are integrated into national level land-use planning.

CONTEXT AND GLOBAL SIGNIFICANCE

Biodiversity context

7. Myanmar is the largest country in mainland South-East Asia, with a land area of 676,553 km and a coastline of 2,832 km. The country spans an elevational range of nearly 6,000 m, from the summit of Hkakaborazi, South-East Asia's highest mountain, at 5,881 m asl, to the shores of the Andaman Sea and the Bay of Bengal. Between these two extremes, the country encompasses several mountain ranges, extensive lowland plains, and one of Asia's largest river deltas. The country also includes all or part of five major rivers: the Ayeyarwady (Irrawaddy), Thanlwin (Salween), Chindwin, Sittaung and Mekong. The major ecosystems in Myanmar can be grouped into forest, freshwater, coastal and marine. In the early 2000s, Myanmar had a forest cover of about 429,000 km (equivalent to 66% of the country's land area), placing it among the countries with the largest remaining forest cover in mainland South-East Asia. The country includes all or part of fourteen Global Ecoregions defined by WWF: the Chin Hills-Arakan Yoma montane forest, Eastern Himalayan alpine shrub and meadow, Irrawaddy dry Forest, Irrawaddy fresh water swamp forest, Irrawaddy moist deciduous forest, Kayah-Karen montane rain forest, Mizoram-Manipur- Kachin Rain forest, Myanmar Coast mangrove, Myanmar coastal rain forest, Northern Indochina subtropical forest, Northern Triangle subtropical forest, Nujiang Langcang Gorge alpine conifer and mixed forest, Tenasserim-south Thailand semi-evergreen rain forest, and Tropical and subtropical moist broadleaf forests.

8. Because of the very wide variation in latitude, altitude and climate within the country, Myanmar supports a high diversity of habitats, and is extremely rich in plant species. The country is located at the convergence of four major floristic regions: the Indian, Malesian (Sundaic), Sino-Himalayan and Indochinese. The available information on species diversity and endemism indicates that Myanmar supports extraordinary plant and vertebrate diversity. However, detailed baseline data are still lacking for many taxonomic groups, and new species for science are still being regularly discovered in the country. These include Leaf Muntjac *Muntiacus putaoensis*, a species of deer discovered in the Northern Mountains Forest Complex in 1997, which is believed to be the smallest species of deer in the world. Myanmar supports at least 251 mammal species, although a number of these species have not been confirmed to occur in recent years, with seven mammal species thought to be endemic. The country supports at least 1,090 bird species, a greater diversity than any other country in

mainland South-East Asia. Myanmar's avifauna contains six endemicspecies, numerous endemic subspecies, several of which may warrant full species status, and at least 19 other restricted-range bird species[20]. The freshwater fish fauna of Myanmar is one of the least known in South-East Asia, forming part of the Indo-Burma biogeographical region. According to Kottelat et al. (2012)[21]the Salween shares most of its 151 species with the Sittaung–Ayeyarwaddy drainages and only a few (33) with the Mekong–Chao Phraya drainages, which likely reflects the lack of earlier connections. The Salween–Sittaung–Ayeyarwaddy fish fauna has more affinities with the Brahmaputra and North Indian fish fauna, which also reflects geological history. The Tenasserim area, although still poorly known, has a fauna related to that of the Salween–Ayeyarwaddy, while Inlé Lake is an aquatic ecoregion of its own with 17 endemic species[22].

9. Myanmar has a population over 58.8 million people. The country is divided into seven States and seven Regions. States and Regions are further divided into districts and townships. The country is one of the most ethnically diverse in the world with 135 recognized ethnic groups that are broadly lumped into 8 major national ethnic races. According to the UNDP in 2010, poverty afflicts 25% of the population with incidence being twice as high in rural than urban areas. Under the new constitution adopted in 2008 each state and region has a regional minister and a parliament to make policy decisions at the local level. This system is just now being implemented and is not yet fully formed and it is likely that further decentralized regional autonomy will occur as this process proceeds. The country has been largely isolated from the outside world for over 50 years and recently going through a process of democratization and opening up to the outside world. This has severely stagnated the economy making it one of the poorest countries in the region and Myanmar's Human Development Index is 0.483, which gives the country a rank of 149 out of 187 countries with comparable data in 2010. The economy is strongly based on agriculture accounting for 36% of the GDP and representing 19% of land use but also relies heavily on the mining of natural gas, gold and jade for much needed foreign currency, as well as the last legally harvested wild teak forests in the world. The country's recent dramatic political shifts have resulted in a rush of foreign investor interest as well as a tourist market that currently surpasses the countries capacity. Foreign arrivals have increased 300% since 2008 and are predicted to increase by 30% annually in the years to come.

10. Since the late 1990s, destruction and degradation of Myanmar's natural habitat has increased, primarily due to logging and agricultural conversion as the country increasingly engaged with the outside world for economic development. Following recent changes in Myanmar's political system the level of development is likely to increase dramatically as the country remains one of the largest untapped economies left in the region.

Protected area system: Current status and coverage

11. In order to conserve the country's globally significant biodiversity, the government has established a network of 43 PAs. 36 of these have been officially gazetted under The

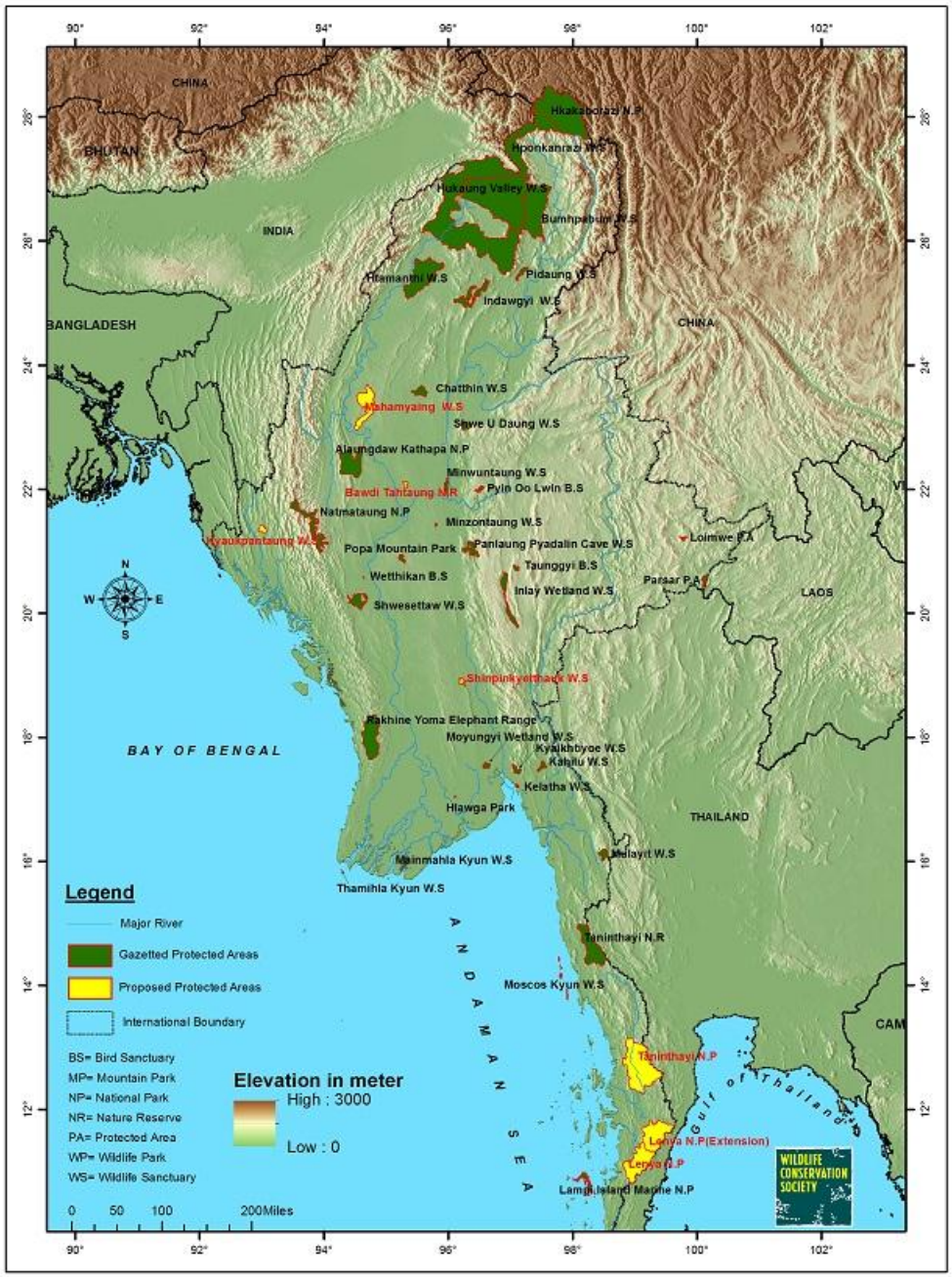
[20] Bird species with a global breeding range of less than 50,000 km^2. For details including country species lists, see: http://www.birdlife.org/datazone/userfiles/file/EBAs/EBAPDFs/p725-778_APX2.pdf

[21]Kottelat M, Baird IG, Kullander SO, Ng HH, Parenti LR, Rainboth WJ and Vidthayanon C. 2012. Chapter 3. The status and distribution of freshwater fishes of Indo-Burma. In Allen DJ, Smith KG and Darwall WRT (compilers). The status and distribution of freshwater biodiversity in Indo-Burma. Cambridge, UK and Gland, Switzerland, IUCN.

[22]Abell *et al*. 2008 Freshwater Ecoregions of the World: A New Map of Biogeographic Units for Freshwater Biodiversity Conservation. BioScience, 58(5):403-414. http://www.bioone.org/doi/full/10.1641/B580507

Protection of Wildlife and Protected Areas Law (see **Figure 1** and **Annex 1 Table 1** for details), while 7 are in the process of approval and currently remain proposed. The 36 PAs cover 5.6% of the total land area of the country, and the addition of the 7 proposed protected areas will increase this to 6.7%. The first PA Pidaung Wildlife Sanctuary was designated in 1918 by the colonial government for the protection of Sumatran rhinoceros. By 1948 when Myanmar became independent, the protected areas system comprised 11 bird and wildlife sanctuaries covering less than 0.3% of the total country area. In the 1980s, the Forest Department initiated, in collaboration with UNDP and FAO, the Nature Conservation and National Parks Project (1981-1984) for the expansion of the protected area system and the establishment of a new institution with specific competence on conservation and PA management.

Figure 1. Protected Areas of Myanmar (WCS, 2013)



12. Currently, the PAs are designated under the Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law of 1994. Under this law, there are six categories of

PAs, namely scientific nature reserves, national parks, marine national parks, nature reserves, wildlife sanctuaries, geo-physically significant reserves (**Table 1**). The Ministry of Environmental Conservation and Forestry (MOECAF) can also designate other types of PAs as appropriate. The PAs range in size from 50 ha (Lawkananda Wildlife Sanctuary) to 1,737,300 ha (Hukaung Valley Wildlife Sanctuary) which covers approximately 45% of the total PAs. The Nature and Wildlife Conservation Division (NWCD) of the Forest Department (FD) is responsible for the national PA network, including the management of individual PAs. Since 2010, the site governance of Hlawga Wildlife Park, a 624 ha park near Yangon, has been jointly managed between the government and a private company, and Thaninthayi Nature Reserve 161,900 ha whose management is funded through a public-private partnership with a group of oil and gas companies.

Table 1: Classification of Myanmar's Protected Areas

Categories	No. of Designated PAs	No. of Proposed PAs	Total	IUCN Categories
1. Scientific Nature Reserve	0	0	0	I - Strict Nature Reserve
2. National Park	2	4	6	II - National Park
3. Marine National Park	1	0	1	II - National Park
4. Nature Reserve	1	1	2	VI - Protected Area with Sustainable Use of Natural Resources
5. Wildlife Sanctuary	26*	3	29	IV - Habitat/Species Management Area
6. Geo-physically Significant Reserve	0	0	0	V – Protected Landscape / Seascape
7. Other Nature Reserve Determined by the Minister	5 **	0	5	N/A

*Including 4 Bird Sanctuaries
**Including 1 Wildlife Park, 1 Mountain Park, 1 Wildlife Reserve and 2 Protected Areas

13. The PA system gap analysis in **Annex 1** provides detailed information about the current extent and management of the PA system, including a complete list of PAs in the country, ecological coverage of the PA network and proposals for extending geographical and ecological coverage. Coverage of the 14 terrestrial ecoregions in Myanmar[23] was compared with coverage of protected areas to provide a basic indicator of ecological coverage for the network and PA coverage within each ecoregion is discussed.

Institutional context

14. The Ministry of Environmental Conservation and Forestry (MOECAF) was upgraded in 2011 to succeed the Ministry of Forestry as the focal and coordinating agency for overall environmental management. It is responsible for biodiversity conservation, protected area and wildlife management, as well as forest management. It is the national executing agency of the project through its Forest Department at national level, and at local level through its subsidiary agencies. There are six departments within MOECAF: the Forest Department, Environmental Conservation Department, Dry Zone Greening, Planning and Statistics, Myanmar Timber Enterprise and the Land Survey Department. MOECAF is also the lead agency on "The Scrutinizing Committee on Land Use and Land Allocation" which is a multi-stakeholder committee, chaired by the minister, currently developing a revised land use policy for the country.

[23]Wikramanayake, E.; Dinerstein, E.; Loucks, C. J.; Olson, D. M.; Morrison, J.; Lamoreux, J.; McKnight, M.; Hedao, P. 2002 Terrestrial ecoregions of the Indo-Pacific: a conservation assessment. Island Press. Washington D.C.

15. The Forest Department is responsible for implementing the Forest Law (1992), Forest Policy (1995) and the National Forestry Action Plan (2001). The NFAP includes a wide range of forest activities including wildlife and nature conservation, including a mandate expand the PA network to 10% of land area; protect and extend reserved forests and protected public forests (PPF); pursue sound programmes of forest development through regeneration and rehabilitation; effectively manage watersheds for the longevity of dams and water reservoirs; optimize extraction of teak and hardwood within the available means; extend forestry research; enforce effective law against illegal extraction of forest products; encourage increasing use of fuel-wood substitutes; export timber and value-added forest products and seek ways and means to export other NWFPs; and promote ecotourism to earn more foreign exchange The Forest Department will receive institutional capacity development assistance from the project, at central level and also in Kachin State and Sagaing Region in relation to the demonstration sites. It will be a key project partner at national, subnational and local levels for the strengthening of protected area management, and the main project partner agency for policy review and improvement.

16. The Nature and Wildlife Conservation Division (NWCD) of the Forest Department was established under "The Protection of Wildlife and Protected Area Law" in 1994, with the mandate to implement the policy and laws of the PAs under the Forest Department. The project will work very closely with NWCD, as the relevant arm of the Forest Department responsible for the PA system. With a staff of 577, NWCD will be the main project partner for PA management activities at the demonstration sites under Component 2. It will be a primary recipient of capacity development and other forms of technical assistance.

17. The Planning and Statistics Division (PSDiv) of the Forest Department is responsible for monitoring and evaluation for all foreign funded projects with the Forest Department. The division will collect information on the project on a monthly basis and report progress to the Director General of the Forest Department.

18. The institutional capacity of the key government agencies involved in PA management, namely NWCD, PSD, and Forest Department Offices for Kachin State and Sagaing Region was assessed during the PPG, the results of which are available in the capacity development scorecards in **Annex 2**. In general, the weak institutional capacity of these bodies for PA management is a significant barrier to achieving management effectiveness within the national PA system and at individual PAs in these subnational administrative areas (see the baseline METT assessments for the four demonstration PAs in **Annex 3**). Therefore, the project plans to implement a capacity development programme to address this weakness. The training institutions that will be involved in the capacity development work are described below

19. Other Departments within MOECAF also have some relevance to the project, including the Environmental Conservation Department (ECD), which has the mandate to implement National Environmental Policy, develop strategies and action plans for integrating environmental considerations into national sustainable development processes, pollution control, etc. The Natural Resources Conservation and EIA Division of the ECD has a key role in EIA procedures, and will be involved in the review of policy and legislation relating to the impacts of development activities on protected areas.

20. In addition, the National Environmental Conservation Committee (NECC) was reformed in April 2011 as the central organization for the national environmental

management in Myanmar, including a number of task forces. The NECC can accept donations, grants, materials and technological aids from local and foreign organizations and manage and use such money, materials and technologies as may be necessary for environmental conservation works. As such, it has a potential role for trust fund management in support of protected areas and biodiversity conservation in line with this project's aims to develop sustainable financing for the PA system. The project will also seek to strengthen its functions as a coordinating body.

21. The Kachin State and Sagaing Regional governments also have a role to play and this role continues to change as the ongoing decentralization process continues to evolve. Of particular importance to the project will be the role of the Chief Minister, the State/Regional parliament (Hlutaw) and the State/Region Ministry of Forest and Mines. While the authority for protected areas is still held at the national level, the state/region level has an expanding role in development planning and management of certain natural resources including minor forest products and fish. The project will work closely with these new institutions to ensure that PA management and biodiversity conservation considerations are central to their development plans.

Government Capacity Development Bodies for Biodiversity Conservation and PAs

22. The Training and Research Development Division (TRDD), under the Forest Department has oversight of all education and capacity building activities for Forest Department staff. This is carried out through a series of training venues including the Central Forestry Development Training Centres (CFDTC). This division will be the main partner for coordinating training components within the project. The CFDTCs aim to contribute to the socio-economic development of people related to the forestry sector by providing training and extension courses to in-service staff and local communities. Examples of training and extension courses include bamboo and bamboo product development, community forestry development, agroforestry, village-owned plantation development and environmental conservation.

23. The University of Forestry at Yezin (under the Forest Department) is the main educational centre for training forest officers in Myanmar. Each year the university produces 200 Range Officers. The project will develop training components that can be adapted for use by the Forest University for the training of future graduates. The University of Forestry has some 64 academic staff, 64 administrative staff and 830 students. Its mission is to provide the students with academic principles and application methods in forest science and to nurture competent forestry professionals. Established originally in 1923, it has evolved from a forestry education establishment to an institute to a full university with undergraduate and postgraduate programmes on Forestry and Forest Products. It has international relations with universities in Germany and Japan and participates in the Mekong Wetland Network and Himalayan Universities Consortium. In future, the University aims to diversify its range of forestry subjects. Main limitations include: a low teacher to student ratio; rapid turnover of teaching staff; difficulty in recruiting qualified FD staff; limited support and low priority in FD planning; and insufficient capacity to implement comprehensive training in Wildlife Conservation and Protected Area Management.

24. The Myanmar Forest School (a training facility managed by TRDD) conducts in service training for Foresters to reach Ranger level. This is a nine-month course offered to long serving forestry staff to help them build the skills needed for promotion within the

Forest Department. Training components developed during the project will be used to enhance this training curriculum for future students.

Policy and Legislative context

25. The key policies and legislation with relevance to Myanmar's PA system were reviewed during the course of project preparation, the results of which are given in **Annex4**. The review covered the primary instruments governing the PA system, namely the Protection of Wildlife and Protected Areas Law (1994), Forest Law (1992), Forest Policy (1995), 30-year Forestry Master Plan (2001) or National Forestry Action Plan (NFAP) and the Environmental Conservation Law (2012). Notably, in 2001, the Government approved a 30-year Forest Master Plan mandating the increase of the Permanent Forest Estate (constituted by reserved forests and public protected forests) to 30% and of PAs to 10% of the total country area as the first stage of PA system expansion. Furthermore, the Forest Master Plan encourages the registration of unclassified forests into community or private forests.

26. The review also covered policies and laws for economic sectors influencing biodiversity and ecosystem management including agriculture, fisheries, tourism, energy and mining: the Freshwater Fisheries Law (1991), Agriculture/Farmland Law and Vacant Fallow and Virgin Lands Management Law (2012), The Land Acquisition (Mines) Act (1894), the Myanmar Mines Law (1994) and new mining legislation in preparation, the Myanmar Tourism Master Plan (2013-2020), and the Energy Law/Myanmar's new energy architecture.

27. Finally, the planning and decision making process affecting the PA system was also included in the review, focusing on the Nay Pyi Taw Accord for Effective Development Cooperation (2013), Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) procedures, the Foreign Investment Law (2012) and the Myanmar Agenda 21 (1997).

28. The project will seek to identify and address weaknesses in the above legal and policy framework for the PA system through the suggestions given in **Annex 4**, and also through a more in-depth and participatory review and analysis process that incorporates capacity building for an inter-departmental working group of environmental policy makers.

THREATS, ROOT CAUSES AND IMPACTS

29. **Threats**: High levels of species richness and endemism make Myanmar a regional priority for conservation. However, decades of economic and political sanctions have resulted in low conservation investment to effectively tackle threats to biodiversity. Recent sweeping political reforms have placed Myanmar on the fast track to economic development—the expectation is increased economic investments focused on the exploitation of the country's rich, and relatively intact, natural resources. Within a context of weak regulatory capacity and inadequate environmental safeguards, rapid economic development is likely to have far-reaching negative implications for already threatened biodiversity and natural-resource-dependent human communities. Climate change will further exacerbate prevailing threats

given Myanmar's high exposure and vulnerability[24].The main threats affecting the national PA system can be summarized as follows.

30. Habitat conversion and degradation:Tropical deforestation accounts for 10% of global annual carbon emissions[25]. Between 1990 and 2005, Myanmar had one of the world's highest levels of deforestation (1.5% of natural forests/year) representing a major contributor to this emerging global problem. In the early 2000s, Myanmar had approximately 66% forest cover, making it one of the most forested countries in South-East Asia. Since that time forest coverage has decreased to less than 48%. In Myanmar, deforestation was historically driven largely by local activities associated with agricultural conversion, fuelwood consumption, charcoal production, as well as commercial logging and plantation development[26].

31. Infrastructure development has had relatively little impact on habitats until recently, although this is likely to increase substantially in the years ahead as the country becomes less isolated and provides the much anticipated link between the growing economies of South-East Asia, China and India. Recently, large infrastructure projects such as hydroelectric dams, and the Dawei deep-sea port, and industrial plantations for oil palm and rubber have impacted biodiversity on a landscape-scale, and there are several recent cases of long established PAs having land excised from them for development projects. By mid-2013, the government had given firms a total of 2.1 million ha in plantation concessions, up from 1.3 million ha and 0.9 million ha in 2012 and 2011, respectively. More than 60% of the concessions were granted in Kachin State and Tenasserim Region, two of the country's most densely forested regions. Many of the concessions are allocated in natural forests and allow firms to log and sell old-growth trees in order to clear the area for rubber, oil palm and other plantation crops. Although exact government data on this type of forest loss is unavailable, researchers believe that plantation expansion "is likely the largest single source of timber in [Burma], especially for non-teak high value timber."[27] Such plantation development has impacted natural habitats and local populations in the Hukaung Valley.

32. Loss of habitat has a serious impact on biodiversity but is also seriously impacts the quality and quantities of ecosystem services such as water provision and regulation, soil conservation and carbon sequestration. Forest fires are also reported in some PAs, connected to traditional agricultural and hunting practices of local people.

33. Deforestation threatens biodiversity by reducing and fragmenting wildlife habitats, limiting wildlife dispersal, and hastening the extinction of wide-ranging Myanmar protected species such as tigers, Asian elephants, wild cattle and other large mammals[28,29]. Once reduced in size, forests may be degraded by agricultural expansion, unplanned development of roads, settlements and other infrastructure. Forests degraded by logging and fire, and secondary plantations are increasing at the expense of primary forests that have higher

[24]Rao M, Saw H, Platt SG, Tizard R, Poole C, Than Myint, Watson JEM. 2013. Biodiversity Conservation in a Changing Climate: A Review of Threats and Implications for Conservation Planning in Myanmar. AMBIO 2013, 42:789–804. DOI 10.1007/s13280-013-0423-5.

[25]Harris, N.L., Brown, S., Hagen, S.C., Saatchi, S.S., Petrova, S., Salas, W., Hansen, M.C., Potapov, P.V. & Lotsch, A. (2012) Baseline Map of Carbon Emissions from Deforestation in Tropical Regions. *Science*,**336,** 1573-1576.

[26]Leimgruber, P., Kelly, D.S., Steininger, M.K., Brunner, J., MÜLler, T. & Songer, M. (2005) Forest cover change patterns in Myanmar (Burma) 1990–2000. *Environmental Conservation*,**32,** 356-364.

[27]: http://www.forest-trends.org/documents/files/doc_4133.pdf

[28]Lynam, A.J., Khaing, S.T. & Zaw, K.M. (2006) Developing a national tiger action plan for the Union of Myanmar. *Environmental Management*,**37,** 30-39

[29]Shwe, N.M. & Lynam, A.J. (2012) A preliminary investigation of the status and threats to Malayan tapir Tapirus indicus in the Taninthayi Nature Reserve, Myanmar. *Tapir Conservation*,**21,** 18-23

biodiversity values[30]. If the current trend in conversion of forests to agricultural and urban lands continues, 7–52% of lowland forest bird species (median 29%) and 9–36% (median 24%) of lowland forest mammals are predicted to go extinct in South-East Asia[31].

34. Overexploitation of biological resources: Wildlife hunting both for international trade and local consumption is highly organized, widespread and increasing, especially due to Myanmar's long permeable border with China. TRAFFIC reports that the black markets along Myanmar, Thailand and China's shared borders play a crucial role facilitating illicit trade in tigers and other endangered species. Hundreds of tiger and leopard parts, representing over 400 individual animals, were also observed during nearly a decade of investigations in Myanmar and Thailand. Forest products are also over exploited particularly through resource extraction quotas sold to local businesses that often overlap with PA boundaries and can be politically sensitive to enforce. Fishing rights are also sold using similar auction methods and often promote commercial over-harvesting while at the same time excluding the subsistence needs of local communities.

35. As forest areas become more accessible through land clearing and logging activities, human intrusions into forests along roads and cleared areas result in extraction of wildlife and other resources to supply the burgeoning trade in the region[32]. South-East Asia is both a centre for the consumption of wildlife products, and also a key supplier of wildlife products to the world. Myanmar is among the South-east Asian countries that act as major sources of wildlife in trade, the trade involving a wide variety of native species, which, in many cases, are declining as a result of unsustainable, and often illegal, harvest[33,34,35,36,37]. Wildlife is traded along routes that lead from forest areas along rural roads, converging with larger road networks that lead through larger economic centres (Myitkyina, Mandalay, Yangon, Dawei, Myeik, and Kawthaung), and onwards to border markets with China, Lao PDR and Thailand, especially those under weak control of the government in Shan and Kayin States (See **Annex 5** for further analysis of wildlife trade and related issues).

36. Pollution: Pollution and habitat destruction from mining (gold, jade, etc.) poses an increasing threat to biodiversity and ecosystem health, since most mines still use antiquated processing techniques that release mercury, cyanide and other pollutants into the soil and rivers around the mine as well as downstream. Since much of Northern Myanmar is peppered with mines most of the major rivers in the country have high levels of at least mercury contamination and possibly other toxic chemicals. This threatens aquatic biodiversity as well as the human population that relies on consuming fish across the country.Large scale

[30]Gibson, L., Lee, T.M., Koh, L.P., Brook, B.W., Gardner, T.A., Barlow, J., Peres, C.A., Bradshaw, C.J., Laurance, W.F., Lovejoy, T.E. & Sodhi, N.S. (2011) Primary forests are irreplaceable for sustaining tropical biodiversity. *Nature*,**478,** 378-381.

[31]Wilcove, D.S., Giam, X., Edwards, D.P., Fisher, B. & Koh, L.P. (2013) Navjot's nightmare revisited: logging, agriculture, and biodiversity in Southeast Asia. *Trends Ecol Evol*,**28,** 531-540.

[32]Lynam, A.J., Khaing, S.T. & Zaw, K.M. (2006) Developing a national tiger action plan for the Union of Myanmar. *Environmental Management*,**37,** 30-39

[33]Platt, S.G., Kalyar & Ko, W.K. (2000) Exploitation and conservation status of tortoises and freshwater turtles in Myanmar. *Chelonian Research Monographs*,**2,** 95-100.

[34]Shepherd, C.R. (2002) *The Trade of Elephants and Elephant Products in Myanmar*. TRAFFIC International, Cambridge, U.K

[35]Shepherd, C.R. & Nijman, V. (2008b) *The wild cat trade in Myanmar*. TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.

[36]TRAFFIC (2008) *What's Driving the Wildlife Trade? A Review of Expert Opinion on Economic and Social Drivers of the Wildlife Trade and Trade Control Efforts in Cambodia, Indonesia, Lao PDR, and Vietnam*. World Bank, Washington D.C.

[37]Nijman, V. (2010) An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation*,**19,** 1101-1114.

commercial gold mining has been recognized as a significant environmental and public health threat at Hukaung Valley WS, with waste produced by its cyanide intensive gold operations contaminating the local soil and the area's water sources. Furthermore, intrusive mining operations cause soil disruption and riverbed erosion, which greatly affects the local ecosystem.Pollution and river habitat destruction from gold and other forms of mining were also recognized as a high threat at Hthamanthi WS and moderate threats at Hkakaborazi NP and Hponkanrazi WS.

37. Invasive Alien Species: Introduction of invasive species, both deliberate and accidental, has occurred at a number of locations in Myanmar, although, to date, there has been little research into the impacts of invasive species in the country. Transboundary movement of IAS is potentially high along the national border of Myanmar with neighbouring countries such as India, Bangladesh, China, Laos and Thailand. The Myanmar NBSAP (2011) presents a preliminary list of the major IAS in Myanmar together with their invasive pathways, distribution in Myanmar, and observed negative impacts. Their presence is associated with the risk of native species losses and as such IAS threaten biological diversity, agricultural and forest ecosystems.

38. Invasive species are potentially a significant threat to some aquatic ecosystems. For example, two large introduced species, Grass Carp (*Ctenopharyngodon idellus*) and Rohu (*Labeo rohita*), are found in Inle Lake, of which the former is considered to definitely pose a threat to the lake's ecosystem (Kullander *et al*. 2004). The Golden Apple Snail *Pomacea canaliculata* is also becoming an extremely serious pest affecting vegetables grown in floating gardens by the *Inthars*. Invasive plant species are a major conservation issue in the Central Dry Zone, where introduced species such as *Prosopis juliflora* and *Euphorbia* spp. dominate the vegetation in some areas, threatening biodiversity and land use. In general, however, it has yet to be determined whether the impacts of invasive species are relatively localized or less severe than those of many other threats to biodiversity in the country. Due to lack of adequate field assessments, the problem is underrated. Therefore, multi-disciplinary research is required to understand the impacts of IAS on biodiversity, environment and local livelihoods (NBSAP, 2011).

39. Climate Change: The implications of climate change for biodiversity conservation planning in Myanmar have recently been reviewed by Rao et al (2013)[38]. Key points from this analysis include the following. Climate scenario analyses have been conducted for Myanmar[39], with predictions for 2001–2020 showing temperature increases of 0.5–0.7^{o}C during the year in lower parts of Myanmar, record high maximum temperatures and a 4% increase in precipitation during March–November across the entire country. In particular, precipitation increases are expected in the wet season in central and north Myanmar. High temperatures and droughts are expected to be the norm, and are likely to be associated with more frequent forest fires in the dry zone of central Myanmar and the northern regions. Conversely, the increase in rainfall events in the wet season is predicted to cause flooding events which could affect livelihoods, transport, and homes. Prevailing and anticipated climatological changes have both direct impacts on biodiversity or exacerbate the impacts of current threats such as deforestation on biodiversity.

[38]Rao M, Saw H, Platt SG, Tizard R, Poole C, Than Myint, Watson JEM. 2013. Biodiversity Conservation in a Changing Climate: A Review of Threats and Implications for Conservation Planning in Myanmar. AMBIO 2013, 42:789–804. DOI 10.1007/s13280-013-0423-5.

[39]Myanmar Initial National Communication (INC) Project Report to theUNFCCC. 2012

40. The review indicates that climate change poses major new challenges to biodiversity conservation as species will be exposed to changes at a rate and magnitude seldom previously experienced, with direct consequences for ecosystem assemblage and the services they provide to humanity[40,41]. However, there is still much to learn before the impacts of climate change on species diversity in Myanmar can be accurately assessed, with a few exceptions (e.g. shifts in the elevational distribution of birds).

41. Importantly, the review predicts the relative stability of ecoregions in Myanmar based on emission scenarios following Iwamura et al. (2010)[42]. Ecoregions of greatest concern include the Irrawaddy Dry Forests in central Myanmar, while in the north, the Mizoram–Manipur–Kachin Rain Forests are expected to be climatically less stable than the Irrawaddy Moist Deciduous Forests and the Northern Triangle Sub-Tropical Forests. The ecoregions to the south of the country appear to be more climatically stable than those the north, but none are robust and will certainly experience some changes. Freshwater swamp forest, a lowland forest type of great regional conservation significance in permanently or seasonally inundated lowlands such as the Ayeyarwady Delta and the floodplains of the Chindwin and other rivers, is expected to be climatically more unstable than Myanmar coastal rainforests (further inland). Overall, ecoregions in Myanmar will be variably affected by climatic impacts and sound interpretation of analyses will be critically important for effective adaptation planning for both species and human communities.

42. Root Causes: The following are identified by the Myanmar NBSAP (2011) as root causes for the range of threats impacting biodiversity conservation in the country.

43. *Economic growth and increasing consumption:* by expanding human populations are the main underlying causes of biodiversity loss in Myanmar. Exploitation of the country's natural resources is being driven increasingly by economic growth and increasing demand from the neighbouring countries for exports of natural gas, wood products and other natural resources. The rapid recent growth of Myanmar's economy will undoubtedly increase pressures on the country's natural resources in the near future.

44. *Poverty and conflict*: The population of Myanmar is predominantly rural, and a significant proportion lives below the US$1 per day poverty threshold. Consequently, there are high levels of dependency on natural resources, particularly in upland areas. Various factors, including external economic forces, population growth and loss of access to land can lead to unsustainable levels of natural resource use, and degradation and loss of natural habitats. These problems have been compounded by decades of armed conflict in areas where several thousands of people have abandoned their land. Poverty and land degradation in the uplands of Myanmar are linked in a mutually reinforcing cycle that is difficult to break.

45. *Capacity Constraints*: Government institutions have the principal responsibility for conserving biodiversity but they are often severely constrained by shortages of financial

[40]Foden, W.B., G.M. Mace, J.-C. Vie´, A. Angulo, S.H.M. Butchart, L.DeVantier, H.T. Dublin, A. Gutsche, et al. 2009. Speciessusceptibility to climate change impacts. In Wildlife in achanging world: An analysis of the 2008 IUCN Red List of Threatened Species, ed. J.C. Vie´, C.H. Taylor, and S.N. Stuart.Gland, Switzerland: International Union for Conservation of Nature and Natural Resources.

[41]Watson, J.E.M., M. Cross, E. Rowland, L.N. Joseph, M. Rao, and A.Seimon. 2011a. Planning for species conservation in a time ofclimate change. Climate Change: Research and technology forclimate change adaptation and mitigation 3: 379–402. http://www.intechopen.com/articles/show/title/planning-for-speciesconservation-in-a-time-of-climate-change.

[42]Iwamura, T., K.A. Wilson, O. Venter, and H.P. Possingham. 2010. Aclimatic stability approach to prioritizing global conservationinvestments. PLoS ONE 5(11): e15103. doi:10.1371/journal.pone.0015103.

resources and technical expertise. For instance, NWCD has insufficient financial, human and material resources to fulfil its mandate to manage PAs[43]. Government institutions responsible for conservation often suffer from low staff morale, lack of performance incentives and training. These constraints represent opportunities for NGOs and academic institutions to play a role in strengthening the capacity of such government institutions.

46. *Lack of Environmental Safeguards*: In the absence of other sources of foreign exchange, the Government of Myanmar views natural resource exploitation as its best option for maintaining hard currency reserves[44]. The government is pursuing a number of export-oriented policies, including oil and gas exploitation, hydroelectricity generation, agriculture and aquaculture development. In implementing export oriented policies, appropriate mitigation measures for biodiversity conservation should be seriously considered. ComprehensiveEIAs are needed for development projects, and integration of biodiversity considerations into government decision making is urgently needed, particularly in the agriculture, forestry, fisheries, mining and energy sectors.

47. *Lack of Comprehensive Land-use Policies and Planning*: Land-tenure systems in most upland areas are based on customary rights under local institutions, which are not upheld under national law. As a result, rural communities are vulnerable to losing access to land through such processes as establishment of commercial plantations by agribusinesses, and appropriation of land for other uses, under the self-reliance policy. This is further compounded by a lack of a specific land-use policy to settle disputes over land tenure, resulting in land degradation.[45] Moreover, unplanned expansion of commercial plantations, such as oil palm and cassava, can lead to large scale conversion of forest. Introduction of comprehensive land-use policies and land-use planning, consistent with sustainable rural livelihoods and biodiversity conservation, is a pressing need.

48. *Undervaluation*: Natural resources are undervaluedin Myanmar as elsewhere, with decisions about natural resource use typically based only on direct use values, such as timber or hydroelectricity revenues. Generally, the immediate benefits of exploiting a natural resource are more attractive than the long-term benefits from its conservation, such as water catchment protection, soil erosion control or other ecosystem services (ES). Valuation and financial mechanisms are needed that enable the beneficiaries of ES to contribute to their conservation, such as carbon offset payments, PES and debt-for-nature swaps.

49. *Lack of Grassroots Support for Conservation*: While the people of Myanmar are generally supportive of conservation objectives, rural people living around PAs may not be supportive of conservation efforts such as PA management[46]. Reasons for this may include low awareness of conservation objectives, lack of mechanisms for local communities to benefit from PAs, and lack of opportunities for grassroots participation in conservation activities. There is a need for general awareness raising, improved community outreach and more participatory approaches towards conservation that accommodate local needs.

[43]Clarke, J.E. 1999. Biodiversity and protected areas: Myanmar. Unpublished report to the Regional Environmental Technical Assistance 5771 Poverty Reduction and Environmental Management in Remote Greater Mekong Subregion Watersheds Project(Phase I).
[44]Eberhardt, K. 2003. A review of challenges to sustainable development in the uplands of Myanmar. In: J. Xu and S. Mikesell (Ed.). *Landscapes of diversity: indigenousknowledge, sustainable livelihoods and resource governance in montane mainlandSoutheast Asia*. pp. 101–11. Proceedings of the III Symposium on MMSEA, 25–28 \August 2002, Lijiang, China. Kunming: Yunnan Science and Technology Press.
[45]Eberhardt, K. 2003. Ibid.
[46]Clarke, J.E. 1999. Ibid.

50. *Wildlife Trade Drivers*: As in other parts of the region[47], wildlife trade in Myanmar has many drivers, the most significant of which are broad-scale rural poverty, expanding markets for wildlife and increased demand from neighbor countries, weak legislation and regulations, poor enforcement, poor animal husbandry practices, customary use of wildlife in ethnic controlled areas, low awareness of the importance of biodiversity, low technical capacity and weak resource management and planning practices.

LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION

51. The long-term vision of the project is for Myanmar to have a robust, representative and effectively managed terrestrial protected area system, which is effectively integrated into broader landscape-level land use planning. To date, the national protected area system has received relatively little support, aside from limited amounts of funding to a small number of select protected areas. The Government wishes to take a modular approach in strengthening the PA system. Due to the level of threat to biodiversity across the country, this project proposes to address both the issue of PA management effectiveness at the level of individual PAs, and of the system's effectiveness through its expansion, aiming to improve ecosystem representation. In the first stage proposed by this project, it will establish a minimum level of systemic, institutional and individual capacity to adequately and sustainably manage the PA system. Site level work will focus on the four PAs in the northernmost part of the country. In addition, the expansion of the PA system and its ecosystem coverage is an important and necessary part of the first stage. The second stage after this project will entail further PA system expansion beyondthe 10% government target, as well as focused site level strengthening of other priority PA landscapes. This project aims to secure important biodiversity areas within the expanded PA system and to strengthen the overall system, while at the same time raising the profile of protected areas within national and state/region level development planning. However, the country faces a number of barriers in achieving this vision, grouped under two main headings below.

Barrier 1: Weak systemic and institutional capacity to plan and manage the expanded national PA system.

52. *Lack of integration of the PAS into national and state/region planning*: Despite the relatively large amount of land currently protected and proposed for protection, the PA system receives insufficient support by the national government and is highly vulnerable to a range of economic interests and large scale development projects, in particular infrastructure projects. For the PA network to provide sustained ecological services and biodiversity conservation, it needs to be integrated within planning at the relevant levels of national and state/region governments. In order to achieve this, the value of the PA system needs to be clearly demonstrated and integrated in the country's development and land use planning. At the same time, the government needs to develop a clear plan for the sustainable financing of the PA system in order to conserve the natural capital of the country as well as to ensure maximum, long-lasting benefits from the PAs.

53. *Weak institutional capacity and financing for PAS management:*MOECAF has only recently seen its role expand beyond general management of forestlands. Therefore its

[47]TRAFFIC (2008) *What's Driving the Wildlife Trade? A Review of Expert Opinion on Economic and Social Drivers of the Wildlife Trade and Trade Control Efforts in Cambodia, Indonesia, Lao PDR, and Vietnam*. World Bank, Washington D.C.

capacity for basic PA system planning and management is extremely weak, with only 577 personnel and an annual operational budget of US$ 750,000 for the NWCD. PA management in Myanmar has been primarily project driven since the early 1990s. Of the 36 notified terrestrial PAs only 20 are staffed and most lack basic infrastructure and equipment unless it was previously provided by an international NGO supported project or was donated by visiting researchers.Information and data management is also weak, resulting in *ad hoc* decision making and constraining strategic planning and effective management.

54. *Inadequate staff capacity and career development prospects within the PA system:*PA staff job descriptions and staff structures are not well aligned with PA objectives. Although some PAs have some kind of management plan, PA staff are underpaid and have insufficient capacity for strategic planning to reduce threats and enhance management effectiveness. There is no established training system and staff have little incentive for improved performance. The recent expansion of MOECAF's mandate to include environmental conservation requires an increased role in planning and reviewing the impacts of infrastructure projects as well as the national PA system. Although it is a welcome move, these new demands will put increased stress on a relatively small number of dedicated professionals within the Ministry. This cadre is comingunder increasing pressure as the government engages with the outside world and numerous new donor agencies, initiatives and projects come to the country for the first time. This burst of new development is going to lead to an increased need for trained professionals that the government currently does not have. This is part of a larger problem across the government that can only be remedied through increased and sustained training and capacity development.

55. *Expanded PA System will require additional systemic, institutional and financial capacity*: The national PA system currently covers only 5.6% of the total land area of the country, however many ecoregions are heavily under-represented. Particularly under-represented ecoregions include Irrawaddy moist deciduous and fresh water swamp forests, Myanmar coastal rainforest, northern Indochina subtropical forest and the Chin Hills-Arakan Yoma montane forest. Under the MNBSAP, the government plans to expand the PA system to 10% of the land surface in line with the Forest Master Plan (2001), improving ecoregion representation. This will stretch available resources for central coordination and technical support, as well as for site management.In particular, there is a serious financial barrier for effective PA system management (see the financial sustainability scorecard in **Annex3**). The budget MOECAF currently receives for PA management is far from sufficient and only barely covers personnel costs of the heavily understaffed organisation. There is also no link between budgeting and PA operational management needs.

Barrier 2: Insufficient management capacity and motivation at the PA level to manage local threats and achieve conservation outcomes.

56. At the PA site level, the management is extremely weak and ad-hoc, heavily relying on external support. Most of the PAs have no management plans and some PAs do not even have any field staff presence to conduct law enforcement. PA management is not a glamorous job and it does not provide the opportunities for income generation that other government or private-sector positions may hold. This makes it difficult to identify and keep dedicated staff to work, particularly at the field level. In terms of staff skills, in particular, law enforcement, habitat condition monitoring and PAneighbour relations are lacking, resulting in very inadequate law enforcement. The conservation planning and management system is

generally perfunctory. In addition, there is a clear disconnect between PAs and local-level development and land use planning, resulting in encroachment and illegal activities within the PAs. The role of these PA staff needs to be better recognized and supported to ensure they can achieve their goals. PA-neighbour cooperation is tenuous, and given the large number of PA neighbouring populations and the intensity of their activities, there is a need for rapidly developing successful models for community participation in management of PAs and their buffer zones.

INTRODUCTION TO PROJECT SITE INTERVENTIONS

57. Component 2 will focus on strengthening PA management effectiveness on the ground at four demonstration PAs (see **Figure 2**). These interventions will cover three of the Priority Conservation Corridors as identified in the MNBSAP and updated by the Myanmar Biodiversity Conservation Investment Vision (MBCIV) multi-stakeholder process in January 2012. These Conservation Corridors include one of Myanmar's two Tiger Conservation Landscapes (TCLs) as identified in the Global and National Tiger Recovery Plans (NTRP). Activities will be implemented across four priority PAs, reflecting the Key Biodiversity Areas (KBAs) identified by the MNBSAP and updated and prioritised through the MBCIV process in January 2012 and priority PAs as identified in the NTRP. Sustainably Managed Landscapes (SMLs) will then be defined by the political, ecological and opportunity context around the selected PAs.

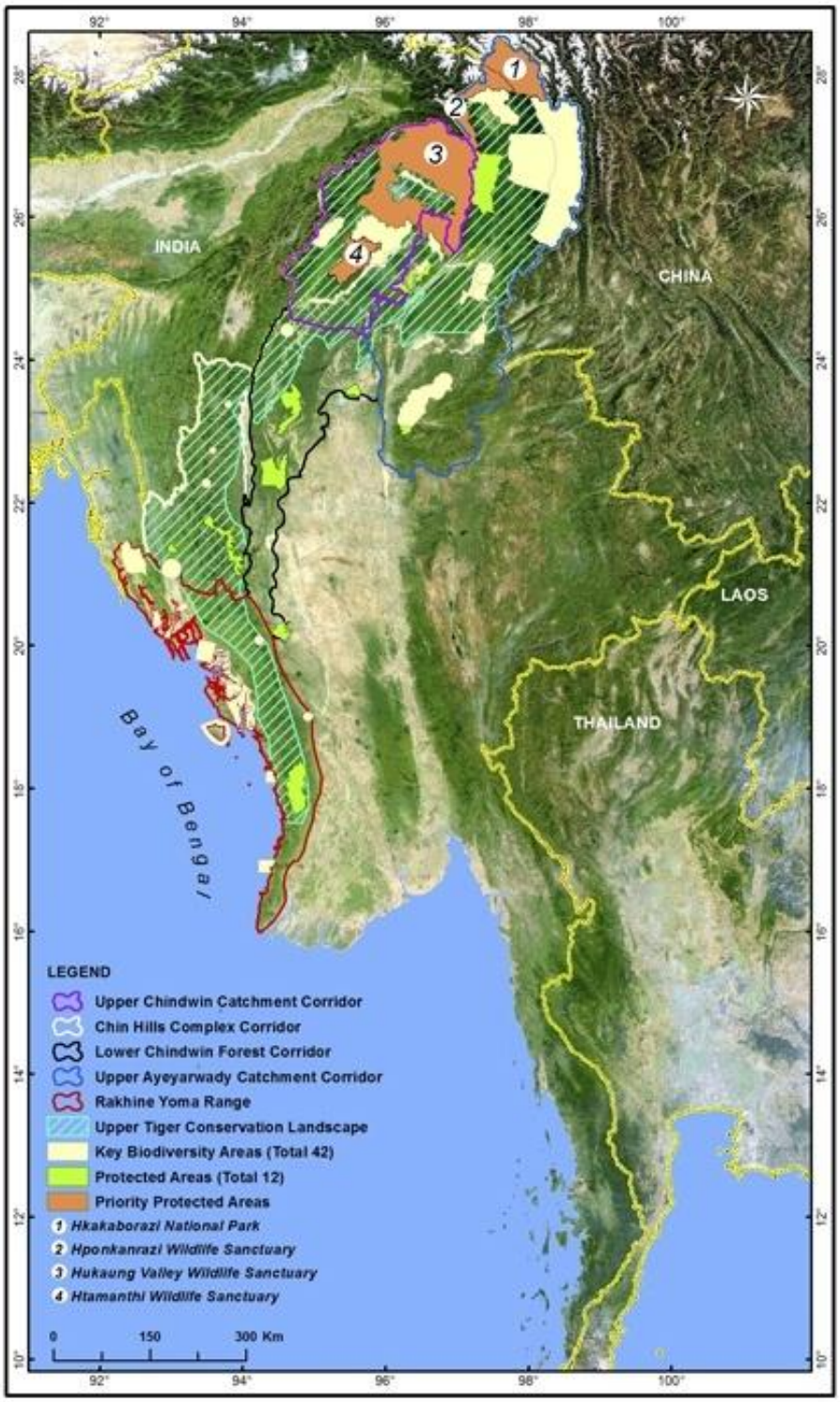


Figure 2. Map showing the project area and demonstration priority protected areas

58. The project would develop a range of activities targeting local threats across the four priority PAs identified within the Conservation Corridors and detailed in **Table 2** below. These would include the development and implementation of site management plans, PA based financing plans, strengthening of PA site operations through capacity development and technical assistance, and development and implementation of pilot systems for community participation including community-based adaptation strategies to safeguard access to natural resources and to promote livelihood opportunities. See the site profiles in **Annex 6** for details.

Table 2. Summary information on the four demonstration protected areas

Protected Area (Admin Unit)	Size (Ha) Year of Gazettal	Current Situation	Key Species	Local Threats	Opportunities
Hukaung Valley Wildlife Sanctuary (Kachin State and Sagaing Region)	1,737,300 Original 2004 Extension 2010	WCS support since 2004 Number of staff: 18 Annual Budget: US$ 14,532	Asian Elephant (EN), Dhole (EN), Hog Deer (EN), Shortridge's Langur (EN), Tiger (EN), Western Hoolock Gibbon (EN), Burmese Narrow-headed Softshell Turtle (CR), Burmese Peacock Softshell Turtle (EN), Keeled Box Turtle (EN), White-bellied Heron (CR), Green Peafowl (EN), Masked Finfoot (EN), White-winged Duck (EN)	Gold mining, Mineral extraction, conversion of forest to plantations, commercial over-exploitation of NTFPs and wildlife, wildlife trade, human encroachment, commercial over-fishing, logging, conversion of wetland habitats	Hukaung Valley WS is the most advanced model of protected area management in the country. Its large size and global importance have made it a focal area for the government and WCS since formal declaration in 2004. Examples from this site will be used to inform management activities at PAs across the Union as well as examples for further capacity building at the Yezin University of Forestry and Central Forestry Development Training Centres. Future activities in relation to the sanctuary will focus on improving community participation mechanisms, testing incentive based systems for law-enforcement and PA management as well as informing the larger development issues in the Upper Chindwin Catchment and Upper Ayeyarwady Catchment Corridors.
Hkakaborazi National Park (Kachin State)	381,200 1996	WCS support since 1999 Number of staff: 18 Annual Budget: US$ 12,153	Black Musk Deer (EN), Shortridge's Langur (EN), White-bellied Heron (CR), *Paphiopedilum wardii* (Endemic), Rhododendron spp. (Endemic), *Euonymus burimanicus* (Endemic), *Euonymus kachinensis* (Endemic)	Commercial over-exploitation of animals and NTFPs, subsistence over-exploitation of animals, wildlife trade, shifting cultivation	Hkakaborazi NP supports SE Asia's highest mountain and extensive high mountain ecosystems that feed the Ayeyarwady River through rain and snow melt. A cascading system of hydropower projects is planned for the M'Hka River just downstream from the National Park. This provides a unique opportunity for the development of PES as well as linking ecosystems services into development planning in the Upper Ayeyarwady Catchment Corridor and the rest of the country. The area also has great potential for linking communities to ecotourism benefits although this is likely to follow models developed in Hponkanrazi WS.
Hponkanrazi Wildlife Sanctuary (Kachin State)	270,400 2003	FD Staff, private tourism sector investment Number of staff: 0	Chinese Pangolin (EN), Dhole (EN), Shortridge's Langur (EN), Keeled Box Turtle (EN), White-bellied Heron (CR),	Commercial over-exploitation of animals and NTFPs, subsistence over-	Hponkanrazi WS is more accessible than Hkakaborazi NP and therefore has experienced a greater number of tourists and more tourism development. The area is also seeing increased private investment in the sector

		Annual Budget: 0	Orchids (*Paphiopedilum tigrinum, Paphiopedilum villosum), Rhododendron spp. (Endemic)*	exploitation of animals, wildlife trade, agricultural expansion, commercial over fishing, human encroachment, shifting cultivation	and holds the potential for improved benefit sharing with local communities.
Htamanthi Wildlife Sanctuary (Sagaing Region)	215,100 1974	Number of staff: 23 Annual Budget: US$ 21,874	Asian Elephant (EN), Tiger (EN), Burmese Narrow Headed Softshell Turtle (CR), Burmese Peacock Softshell Turtle (EN), Burmese Roofed Turtle (EN), Yellow Tortoises (EN), White-rumped Vulture (CR), White-winged Duck (EN), Green Peafowl (EN), Masked Finfoot (EN), *Dipterocarpus baudii* (CR), *Dipterocarpus turbinatus* (CR), *Hopea helferi* (CR), *Dalbergia oliveri* (EN), *Dipterocarpus alatus* (EN), *Dipterocarpus costatus* (EN), *Shorea roxburghii* (EN)	Pollution, human encroachment, gold mining, commercial over-exploitation of animals and NTFPS, wildlife trade, subsistence over-fishing, shifting cultivation, conversion of wetland habitats	Htamanthi WS is another important lowland forest site in the Chindwin Watershed. The area still holds tigers and elephants but is yet to develop an effective management system.
Total Hectares	**2,604,000**				

STAKEHOLDER ANALYSIS

59. During the project preparation stage, a preliminary stakeholder analysis was undertaken in order to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in project implementation. See the Stakeholder Involvement Plan in Section IV Part IV for the major categories of stakeholders identified, their roles and responsibilities in the project, and the project's approach for stakeholder involvement. **Table 3** lists the key stakeholders and their roles associated with this project.

Table 3. Stakeholders involved in the project indicating their roles and responsibilities

Stakeholder	Relevant roles in the project
Ministry of Environmental Conservation and Forestry	MOECAF was upgraded in 2011 to succeed the Ministry of Forestry as the focal and coordinating agency for overall environmental management. It is responsible for biodiversity conservation, protected area and wildlife management, as well as forest management. It is the national executing agency of the project, through its Forest Department, at national level and at local level through its subsidiary agencies. There are six departments within MOECAF: the Forest Department, Environmental Conservation Department, Dry Zone Greening, Planning and Statistics, Myanmar Timber Enterprise and the Land Survey Department. MOECAF is also the lead agency on "The Scrutinizing Committee on Land Use and Land Allocation" which is a multi-stakeholder committee, chaired by the minister, currently developing a revised land use policy for the country.
Environmental Conservation Department (of MOECAF)	The Deputy DG of ECD is the current GEF Operational Focal Point. The Environmental Conservation Department is set up for implementation of environmental conservation and management in Myanmar. Its mandate is to: - implement National Environmental Policy; -develop Short, Medium and Long Term Strategy, Framework, Planning and Action Plan for the integration of environmental consideration into the national sustainable development process; - manage natural resources conservation and sustainable utilization; - manage the pollution control on water, air and land for the sustainable environment; - cooperate with Gov. Organizations, Civil Society, Private and International Organizations concerned with environmental management. The project will build institutional capacity within ECD for its roles related to biodiversity conservation and the management of funds for conservation related activities.
Natural Resources Conservation and EIA Division, under the Environmental Conservation Department (of MOECAF)	The Natural Resources Conservation and EIA Division has the following mandate: •Assessment of natural resources cooperated with relevant Departments •To conserve ecosystem, nature reserve, biodiversity •To conserve wetland and river for sustainability •To develop EIA procedures and regulation to minimize the impacts •To monitor the implementation of environment conservation •Review EIA reports. With a key role in EIA procedures, it will be involved in the review of policy and legislation relating to the impacts of development activities on protected areas.
Forest Department (of MOECAF)	The main project partner agency for policy review and improvement, and indirectly through its Nature and Wildlife Conservation Division for demonstration activities in the field. Responsible for implementing the Forest Law (1992), Forest Policy (1995) and the National Forestry Action Plan (2001). The NFAP includes a wide range of forest activities including wildlife and nature conservation, including a mandate expand the PA network to 10% of land area; protect and extend reserved forests and protected public forests (PPF); pursue sound programmes of forest development through regeneration and rehabilitation; effectively manage watersheds for the longevity of dams and water reservoirs; optimize extraction of teak and hardwood within the available means; extend forestry research; enforce effective law against illegal extraction of forest products; encourage increasing use of fuel-wood substitutes; export timber and value-added forest products and seek ways and means to export other NWFPs; and promote ecotourism to earn more foreign exchange The Forest Department will receive institutional capacity development assistance from the project, at central level and also in Kachin State and Sagaing Region in relation to the demonstration sites. It will be a key project partner at national, subnational and local levels for the strengthening of protected area management.
Nature and Wildlife Conservation Division, under the Forest Department (of MOECAF)	The NWCD was established under "The Protection of Wildlife and Protected Area Law" in 1994, with the mandate to implement the policy and laws of the PAs under the Forest Department. The project will work very closely with NWCD, as the relevant arm of the Forest Department responsible for the PA System. NWCD will be the main project partner for PA management activities. It will be a primary recipient of capacity development and other forms of technical assistance.
Training and Research Development Division, under the Forest Department (of MOECAF)	The TRDD has oversight of all education and capacity building activities for Forest Department staff. This is carried out through a series of training venues including the Central Forestry Development Training Centres (CFDTC). This division will be the main partner for coordinating training components within the project.

University of Forestry, Yezin, under the Forest Department (of MOECAF)	The University of Forestry is the main educational centre for training forest officers in Myanmar. Each year the university produces 200 Range Officers. The project will develop training components that can be adapted for use by the Forest University for the training of future graduates.
Myanmar Forest School	The Myanmar Forest School conducts in service training for Foresters to reach Ranger level. This is a nine-month course offered to long serving forestry staff to help them build the skills needed for promotion within the Forest Department. Training components developed during the project will be used to enhance this training curriculum for future students.
Planning and Statistics Division, under the Forest Department (of MOECAF)	This division is responsible for monitoring and evaluation for all foreign funded projects with the Forest Department. The division collects information on the project on a monthly basis and reports progress to the Director General of the Forest Department.
Planning and Statistics Department (of MOECAF)	The Planning and Statistics Department is the primary coordinating body within MOECAF. This department will receive institutional capacity development assistance from the project as well as provide oversight from the Minister through their participation on the Project Board.
Ministry of National Planning and Economic Development	National government agency responsible for national economic and development planning, as well as development of strategies and policies in determining financial allocations for the various sectors of the national economy. Therefore it is an important stakeholder in the project, particularly in the financing and mainstreaming component. This ministry also has oversight of all foreign aid in the country and is the main government counterpart of UNDP in Myanmar.
Ministry of Finance	An important stakeholder in particular for developing policy to support future financing opportunities for the PA network from the Union Government Budget.
National Environmental Conservation Committee (NECC)	Reformed in April 2011 as the central organization for the national environmental management in Myanmar.There are the following task forces within the NECC: Land Use, Rivers and Wetlands, Industrial and rural areas, Policy, Law and Procedure, Environmental Education and Awareness.The project will seek to strengthen its functions as a coordinating body. The NECC can accept donations, grants, materials and technological aids from local and foreign organizations and manage and use such money, materials and technologies as may be necessary for environmental conservation works. As such, it has a potential role for trust fund management in support of protected areas and biodiversity conservation. The NECC is also the National Coordinating Body for Myanmar's National Adaptation Programme of Action (NAPA) to Climate Change (2012).
Forest Research Institute	The institute provides technical information on all aspects of forestry and forest-based activities, through the results of research works, to increase the contribution of the forest sector to the well-being of the nation. It provides information and data to the Forest Department and other stakeholders.
State and Region Governments	In the long-term decentralization process, State and Region Governments will play important roles in development planning, land use planning and resource management planning in their respective State and Region. Therefore it is important to increase awareness on the value of PAs and their buy-in to support the PA system. The project will engage with Kachin State and Sagaing Region governments in relation to management of the demonstration PAs and their buffer zones, as well as their integration into regional development planning processes associated with ecosystem service provision.
Wildlife Conservation Society (WCS)	WCS has been supporting the Myanmar Forest Department with field-based training and pioneering new models of protected area management since 1993, as well as conducting collaborative expeditions to some of the country's most remote areas. It will be the key national execution partner with MOECAF, leading activities at the field level and providing technical support for the systemic and institutional capacity building component.
Police	Important stakeholder for trade surveillance and law enforcement at the site level.
Local communities	Key users and beneficiaries of forest and wetland resources. They are the affected parties of human-wildlife conflict, and play a major role in local habitat conservation, controlling of poaching, and natural resource management. Critical participants of the project at the local level. Further information is available in the site profiles in **Annex6** and PA stakeholder workshop reports in **Annex7**.
CBOs	CBOs will be a primary stakeholder at the local level interventions of the project. They are potential implementers of site level activities that focus on community based activities and participation.
Private businesses	Logging and plantation concessionaires, HEP companies, tourism operators, private business owners will be key stakeholders for the project work; given the pressure their activities pose on PAs and biodiversity.

BASELINE ANALYSIS

Financing Protected Area System Management

60. Although a few Protected Areas have existed in Myanmar for a long period of time, there has been no systematic approach to protected area management. The PA network is only now being established, and lacks appropriate institutional structures, management capacity and particularly sources of long-term financing. National government investment in PAs has historically been very low. Although there have been recent increases, as a consequence of the overall increase in the Union Government budget, for the 2013-14 Financial Year the expected total budget allocation to PA management is approximately $1 million USD, or $27 per square kilometer per year. Most of these funds are dedicated to salaries, and very little is available for operational costs such as patrolling or community outreach. This falls far short of the amounts needed to ensure even basic routine management. An approximate estimate is that effective management of the existing PA network (which covers 5.6% of the country) would require around $19 million USD/year. This assumes that effective management costs around $500 per square kilometer per year (or $5/hectare/year), which is at the lower end of estimates[48].Details of the funds available for PA system management against estimated needs are given in the GEF Financial Sustainability Scorecard in **Annex 3**.

61. In 2001, the Government approved a 30-year Forest Master Plan mandating the increase of the Permanent Forest Estate (constituted by reserved forests and public protected forests) to 30% and of PAs to 10% of the total country area as the first stage of PA system expansion. Furthermore, the Forest Master Plan encourages the registration of unclassified forests into community or private forests. Current levels of financing are highly inadequate to support even basic management of the whole PA system as it currently stands (at 5.6% of national land area), let alone the effective management of an expanded PA system that meets the 10% national target, which will place additional pressures on available resources.

62. Given the likely influx of donor financing into Myanmar over the next few years there is a high risk that PAs become overly dependent on short-term donor grants, as has happened in other least developed countries in the region (notably Cambodia and Lao PDR). Any reliance on external donor support is inherently unstable, reduces government ownership, and is not sustainable over the long time periods needed to address and reverse the decline in species populations and the erosion of ecosystem services. In addition, donor financing is unlikely on its own to make-up the shortfall in PA financing. Therefore, novel and more secure sources of funding are needed to ensure the successful long-term conservation of Myanmar's biodiversity (see **Annex 8** on sustainable financing).

63. Only one environmental valuation study has been completed to date[49], focusing on Myanmar's overall forest ecosystem services rather than just the PA network. This estimated that the value of Myanmar's forest ecosystem services is over $7 billion USD. The figure is far higher than the figures recorded in most development and economic statistics, which only take account of commercial wood and non-wood product removals. Income earned from forest utilisation accounts for less than 15% of the value estimated in this study. By far the

[48]figures from James et al. 2001, corrected for inflation
[49]Emerton and Yin Ming Aung, 2013

largest share – 85%, or around $6 billion USD − comes from forest ecosystem services that maintain the productivity of other sectors, add value to their output, and help them to avoid costs, losses and damages. This includes, for example, forest carbon sequestration, watershed protection services, insect pollination, tourism, and mangrove protection of coastlines and fish nurseries. Investment in forest conservation is therefore expected to deliver significant net returns, estimated at around $39 billion USD over the next twenty years, or a net present value of $10 billion USD.

64. Forest watershed protection is key to the hydropower sector. Current installed capacity in Myanmar is around 2,500 MW[50], generating around 8.6 billion kWh and distributing around 6 billion kWh[51] – about three quarters of total electricity generation capacity in the country. The Ministry of Electric Power estimates the country's hydropower potential to be more than 100,000 MW, and has identified almost a hundred potential sites for development, with an estimated capacity of just under 50,000 MW (ADB 2012). Almost all of these planned or existing schemes lie within, or immediately downstream of, forested areas, but there has been no assessment of the overlay with the PA network. The value of watershed protection services to the hydropower industry in Myanmar is estimatedat $721 million USD[52].

INGO Technical Assistance for Biodiversity Conservation and Protected Areas

65. Since 1993 the Wildlife Conservation Society (WCS) has supported the Myanmar Forest Department starting with field-based trainings and collaborative scientific expeditions to some of the country's most remote areas. This collaboration has resulted in the establishment of four new protected areas including Hkakaborazi and Lampi Island National Parks and the Hukaung Valley Wildlife Sanctuary, one of the largest protected areas in mainland tropical Asia. Since 2004, WCS has worked with NWCD to develop, field test and implement a series of protected area management systems that include law enforcement, key species monitoring and community based natural resource management focused primarily around two PAs: Hukaung Valley Wildlife Sanctuary and Hkakaborazi National Park, where WCS has raised the primary funding for all field-related activities. The total amount of funding mobilized by WCS for these purposes over the last five years is approximately $4,000,000.

66. Several other INGOs have worked in Myanmar since the late 1990s, including the Smithsonian Institution, the California Academy of Sciences, BirdLife International, Institut Oikos, and most recently Fauna and Flora International, on projects that included species specific research as well as exploration, skills development and PA management. Other projects with an environmental focus have included work on sustainable management of forest resources, especially community forestry and mangrove rehabilitation. The resources provided by these INGO partners to support conservation activities in Myanmar is estimated to average $1,000,000 per year.

UN Support for Sustainable Natural Resource Management

[50]WEF 2013. New Energy Architecture: Myanmar. Report prepared by World Economic Forum, Accenture and Asian Development Bank.
[51]MNPED 2012. Myanmar Data 2011. Central Statistical Organization, Ministry of National Planning and Economic Development, Nay Pyi Taw
[52]Emerton, L. and Yan Ming Aung. (2013) The Economic Value of Forest Ecosystem Services in Myanmar and Options for Sustainable Financing. International Management Group, Yangon.

67. UNDP's baseline activities encompass a range of community sustainable natural resource management initiatives which were implemented as part of the Human Development Initiative (HDI) from early 1994 to 2012. Environmental Governance, as part of the UNDP's Country Programme (2013-15), is being implemented to strengthen national capacities to manage and utilize natural resources in a sustainable way.

68. In addition, in November 2011, Myanmar became a UN-REDD Programme partner country and is working towards developing a national REDD+ readiness road map. A REDD+ readiness programme is under development, for which bilateral support of approximately $500,000 per year is being mobilized. Although the baseline activities are significant, the threats to the globally significant biodiversity of Myanmar are on the increase and biodiversity is on the decline.

Other Initiatives

69. Myanmar is a partner of the Global Tiger Initiative and was represented at the Global Tiger Summit in St Petersburg in September 2010 by the then Minister of Forestry. It submitted a National Tiger Recovery Plan (NTRP), as part of the Global Tiger Recovery Plan in June 2010. Myanmar is a CITES signatory and a CITES-MIKE Programme partner and has officially nominated two Asian Elephant PAs: Alaungdaw Kathapa National Park and the Rakhine Yoma Elephant Range to CITES as MIKE implementation sites.

70. In light of the weak capacity of the agency responsible for PA system management, inadequate financing for PA management, the fluid situation of the government in the current transitional period and overwhelming economic interest in the country, the threats are intensifying rapidly, and even biodiversity within the PA system is not shielded from the afore-mentioned threats. There has been no attempt to improve the national PA system in the country as a whole by systematically targeting barriers at different levels of PA administration – at national, state/region government and site levels.

PART II:Strategy

PROJECT RATIONALE AND POLICY CONFORMITY

Fit with the GEF Focal Area Strategy and Strategic Programme

71. The proposed project is consistent with the Goals of GEF Biodiversity Objective 1: Improve Sustainability of Protected Area Systems (BD1). Especially the project will contribute to Outcome 1.1: Improved management effectiveness of existing and new PAs through increased capacity and standardized practices to improve management and planning especially linked to local community participation and financial planning, while at the national level the overall coverage of the terrestrial and aquatic PA system will be increased from 3,788,697 ha (5.6% of Myanmar's land area) to 6,765,530 ha(10%) with increased coverage of under-represented ecoregions and essential corridors.The project will also strengthen capacity to plan and manage the PA system and individual PAsat national, sub-national and local levels.

72. The project will also contribute directly to Outcome 1.2: Increased revenue for the PA systemby identifying opportunities for sustaining financial support to the PA network and developing a clear policy framework for funds to be used for PA management. The project

will also contribute to the implementation of the Programme of Work on Protected Areas (PoWPA) as submitted to the CBD secretariat in January 2012, in particular: Priority Action 1: Developing Management plans for PAs, Priority Action 2: Promoting community participatory PAs management; and Priority Action 3: Ensuring sustainable financial mechanisms for PA management. The Project, furthermore, directly contributes to achievement of the Aichi Targets, in particular under the strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. It contributes to Target 11 through increasing significantly the coverage and connectivity of the PA system in important regions with high biodiversity importance and significant ecosystem services, and by increasing management effectiveness of the PA system in a way that is integrated into the wider landscapes.

Rationale and summary of GEF Alternative

73. **The incremental approach can be summarised as follows**: The Government of Myanmar has clearly identified biodiversity conservation as a priority and has contributed its limited available resources towards protecting a portion of the country's rich biodiversity. However, despite strong commitments from the government, actions are seldom taken to systematically remove the barriers to the establishment of a sustainable PA system. In addition, in many existing PAs, growing pressures for land and biological resources entails a need for urgent action in order to prevent further degradation of critical ecosystems and loss of endangered species. The proposed intervention is particularly timely, given that with the recent political changes and rapid economic boom the country is experiencing there is now a greater need than ever to strengthen the PA network, securing the critical biodiversity hotspots to be protected within the PA system and establishing the basic foundation for effective management at the site and landscape levels.

74. **In the baseline situation,** a lack of capacity and resources, insufficient political support and an inability to expand management systems will mean that threats to the PAs and their associated biodiversity and ecosystem services will continue to grow. Amidst the growing frenzy of rapid economic development, substantial amounts of globally important biodiversity will be lost and degraded in the coming decades. Although there are some long-established PAs in Myanmar, there has been no systematic approach to protected area management. The PA network is only now being established, and lacks appropriate institutional structures, management capacity and particularly sources of long-term financing. National government investment in PAs has historically been very low, and current allocations are insufficient to support even routine operational costs such as patrolling or community outreach. This falls far short of the amounts needed to ensure even basic management. Against this backdrop, there have been some positive and systematic approaches towards strengthening the management and protection of natural resources, notably through implementation of the Forest Master Plan (2001), which aims to expand the PA network to 10% of land area. Based on the national REDD+ readiness road map,the national REDD+ programme is under development, a National Tiger Recovery Plan has been developed, and both international donor programmes and INGOs continue to contribute positively towards biodiversity conservation in Myanmar. However, these measures are completely inadequate to provide the systemic improvements needed to address the intense and increasing scale of threats impacting Myanmar's biodiversity.

75. **In the scenario enabled by the GEF Alternative**, systemic and institutional barriers towards improved PA management and sustainable financing in Myanmar will be removed at

the national, state and site levels. The first stage of PA system expansion will be achieved, with PA coverage expanded to at least 10% of the national terrestrial area, better representing the globally significant ecosystems within the country. Financing for the PA system will be improved using a variety of economic tools and by increasing government investment as well as establishing new revenue streams. Capacity of the MOECAF will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, and the SMART[53] patrolling and law enforcement monitoring system. On the ground, PA management will be significantly improved at the four target PAs in three high priority conservation corridors. The lessons learnt from these PAs will be used to increase capacity nationwide by drawing on successful practices and mainstreaming them into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centre (CFDTC) to train future Forest Department staff. Opportunities at the site level will determine pilots to sustainably finance their operations. These ground level activities will be used to raise the awareness of relevant decision makers concerning the PA network and ensure that all PAs in the country are integrated into national level land-use planning.

76. **Global Environmental Benefits:** The immediate global environmental benefits are improved management of an expanded terrestrial PA network in Myanmar covering 6,765,530 ha (10% of total land area), in the largest and most heavily forested country in mainland South-East Asia with 14 WWF Global Ecoregions within the territory. The expanded and more effective PA network will directly benefit Myanmar's globally significant populations of a number of species of conservation concern, including Tiger, Asian Elephant, and primates, as well as over 80% of the birds found in South-East Asia and some of the most highly diverse plant communities in the world[54].

PROJECT GOAL, OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES

77. The objective of the proposed project is to strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing. This will be secured through two project components. Myanmar is experiencing a rapid boom in development after over 50 years of relative isolation. This unique period in history allows a tremendous opportunity to benefit the global environment by addressing local, national, and global environmental challenges and to promote sustainable livelihoods and biodiversity conservation in Myanmar. The project plans to strengthen PA management in two Priority Conservation Corridors identified by the MNBSAP, identify sustainable funding opportunities for four focal PAs in those corridors and integrate PA management and finance into broader state and national level development planning. Lessons from the selected demonstration PAs will be used to increase the overall effectiveness of the national PA system.

[53]SMART (Spatial Monitoring and Reporting Tool) patrol system developed by WCS and partners globally is based on an established tool called Management Information System (or MIST). MIST allows rangers on field patrol to use handheld GPS devices to record geospatial and metadata information about encounters with poachers, snares, and other types of disturbance and encroachment in the protected area. Rangers also collect information about sightings or signs of key species they encounter. The field data is subsequently downloaded from the GPS device to a central computer where it is aggregated as a local and/or national level dataset. This compiled data gives protected-area managers and other conservation stakeholders an unparalleled 'big picture' view of where resources are most needed and where they can most effectively be deployed.

[54]See situation analysis and site profiles for details of ecosystems and species

78. **The project's development goal is to** contribute to the conservation and sustainable use of globally significant biodiversity in Myanmar. **The project objective is to** strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing.

79. In order to achieve the above objective, and based on a barrier analysis (see Section I, Part I), which identified: (i) the problem being addressed by the project; (ii) its root causes; and (iii) the barriers that need to be overcome to actually address the problem and its root causes, the project's intervention has been organised into two components (in line with the concept presented at PIF stage). **Component 1** will address the first barrier, the weak systematic and institutional capacity to plan and manage the expanded national PA system through a range of inputs aiming to strengthen the national and regional policy and planning frameworks in relation to PAs, build central capacity for PA system management, expand the PA system coverage to 10% of the national land area, develop a systematic approach for sustainable financing of the expanded PA system, and integrate PA values into regional and local development for sub national government units associated with the demonstration PAs.

80. **Component 2** will address the second barrier, insufficient management capacity and motivation at the PA level to manage local threats and achieve conservation outcomes, focusing on strengthening management effectiveness, financial sustainability, community engagement, monitoring and planning to address external threats at the four selected demonstration PAs.

81. The two components will result in the following project outcomes which are in line with the UNDP's Country Programme output[55]:

- **Outcome 1: Enhanced systemic, institutional and financial frameworks for PA expansion and management** through strengthening national policies and legislation relating to PA management and biodiversity conservation, strengthening the capacity of the Forest Dept. to manage the PA system more effectively, institutionalizing training programmes for PA managers within the Forest Dept., developing and piloting asystem-wide strategy for sustainable financing for the expanded PA system, supporting subnational government to incorporate PA values into regional development planning, and expanding the PA system based on a gap analysis for terrestrial ecosystems and PA network review.

- **Outcome 2: Strengthened management and threat reduction in the target PAs and buffer zones** through intervention at the four demonstration PAs including strengthening PA management through business plans, strengthening operational management to address existing threats to biodiversity, developing and implementing pilot systems for community participation, increasing capacity for monitoring, assessing and reporting the impacts of improved PA management on ecosystems, key species, threats and local livelihoods, and conducting an analysis of drivers and planning for forestry and wildlife law enforcement in Kachin State.

Outcome 1: Enhanced systemic, institutional and financial frameworks for PA expansion and management.

[55] UNDP CP output "Enhanced capacities to sustainably manage natural resources at local, regional and national levels.

(Total Cost: USD 14,926,847; GEF USD 1,870,547; Co-financing USD 13,056,300)

82. Under Outcome 1 the project will focus on improving the basic systemic and institutional capacity for sustainable PA system management in the country. Given the long isolation of the country, the project will address the foundational issues forPA system management, such as instalment of the PA agency's fundamental competency including securing minimum required staffing structure, clear standards for management and streamlined work process, as well as staff capacity development and systems for continued staff skills enhancement. The first stage of the PA expansion plan of the government will be supported, achieving gazettal of up to seven new PAs before the end of the project. Although operationalisation of such PAs needs to be supported through future projects, this project aims tolegally secure the most important biodiversity hotspots and corridors in the country.

83. To improve Myanmar's policy and legislative framework for PA management and biodiversity conservation (**Output 1.1**), the strengthening of relevant policies relating to PA management and biodiversity conservation will be supported, based on an analysis of existing policies to identify gaps and weaknesses to be addressed (see preliminary analysis in **Annex 4**). This process will be informed through a review of international best practice as well as lessons learnt from the field. Relevant policies relating to PA management and biodiversity conservation will be revised or drafted and submitted to relevant authorities for review and adoption.

84. In order to increase systemic and institutional management capacity (**Output 1.2**), basic capacity will be installed within the Forest Department(FD) for effective management of the PA system. This will start with the preparation of a capacity development strategy and action plan for increasing the management effectiveness of the PA system. A range of measures will be implemented to establish and institutionalize professional competency standards for PA management including an individual performance monitoring system; incentive mechanisms for increasing the motivation of field staff; institutionalisation of a modernized PA reporting system; establishment of law enforcement and habitat/biodiversity monitoring protocols; establishment and institutionalisation of PA data/information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities; and development of official guidelines for community engagement and co-management.

85. Furthermore, a government-led training programme on PA management will be implemented through the Training and Research Development Division of the FD (**Output 1.3**). The programme will mainstream international best practices in conservation and PA management into the teaching programmes of Yezin University of Forestry and both branches of the Central Forestry Department Training Centre (CFDTC) including the introduction of three new courses. At least 150 PA field staff will be trained in SMART enforcement patrolling and biological monitoring of key ecosystems and threatened species at the CFDTCs during the project. Overall improvements in capacity will be tracked using the UNDP capacity scorecard (see **Annex 2**).

86. Working with the Government of Myanmar, activities under **Output 1.4** will aim to develop and pilot a system-wide strategy for sustainable financing of the PA network. This will include development of a system-wide PA financing strategy, which will evaluate options to generate revenues to cover the management costs (especially operational management costs) of the expanded Myanmar PA network and demonstrate the broader

economic potential of the country's remaining wild areas. The strategy will also incorporate modern concepts of community participation in PA management, benefit-sharing and alternative livelihoods. Depending upon the results of the financing strategy and a series of assessment studies, the project will developprocedural frameworks, mechanisms and policy recommendationsfor identified sustainable financing opportunities(e.g. Trust Fund development, PES with the hydropower industry, offsets, or a tourism fees concession system). Finally, the project will work closely with the Myanmar REDD+ Working Group and the UN-REDD Programme to identify synergies and integrate PAs into the candidate REDD+ strategies. Demonstration of sustainable financing mechanisms at PA level will be conducted in **Component 2**, linking with development of the national approaches under this output.

87. Under **Output 1.5**The project will support enhancement of awareness and knowledge on the part of State, Region and local government units in Kachin State and Sagaing Region, on the value of PAs in terms of ecosystem services and other potential income sources for local communities, drawing on the economic studies in **Output 1.4** and demonstration activities in **Component 2**. This support aims to catalyse local government support for the PA system so that they will be able to incorporate these values into regional and local development and fiscal planning.

88. The project will support expansion of the PA system (**Output 1.6**) to secure the minimum necessary areas for biodiversity conservation, and establish an enabling framework for increasing the sustainability of the PA system. The project will identify opportunities to increase coverage of the terrestrial PA network managed by the Forest Department to 10% of landarea as highlighted in the Myanmar NBSAP (2011). A PA system gap analysis conducted during project preparation provides a strategic basis for system expansion towards the national government's target of 10% coverage of PAs, including comprehensive representation of ecoregions and key species. Biological and social ground-truthing surveys will be conducted for potential new PAs, followed by the delineation of boundaries in cooperation with local stakeholders, and the official gazettement process.

89. The **expected conservation outcomes** from Component 1 are the expansion of the national terrestrial PA system to 10% of Myanmar's land area; increased coverage of under-represented ecoregions and essential corridors; greater effectiveness and financial security for PA system management through capacity building and more sustainable financing resulting in a reduction of threats and their impacts on PAs; and a strengthened policy framework for the PA system that increases coordination and recognition by other sectors, resulting in a reduction of inter-sectoral conflicts and more harmonized and sustainable development planning. The outputs necessary to achieve this outcome are described below.

Output 1.1: Strengthened national policies relating to PA management and biodiversity conservation

90. To improve Myanmar's policy framework for PA management and biodiversity conservation, the project will support the strengthening of relevant existing policies based a gap analysis to identify gaps and weaknessesto be addressed. During the PPG, a preliminary gap analysis was conducted (see **Annex 4**), identifying initial areas for improvement of related environmental and sectoral legislation.

91. During the full project, two small working groupswill be established to review key policy issues related to sustainable financing and land use issues respectively. These working groups will be composed of individuals responsible for policy and legislation development from the related government agencies. They will be facilitated by an international consultant on legal and institutional capacity building to undertake a systematic review and capacity building process that will initially provide training and exposure to international best practice for such policy and legislation, in line with the requirements and guidance of CBD and other MEAs that Myanmar is a party to. This will be followed by an iterative process of analysis and review of specific policies and legislation (including the Protected Areas Law), led by the two working groups and facilitated by the international consultant. The working groups will convene a series of round table discussions for related experts to inform their review and analysis concerning key issues to be determined in due course, but which may include revisions to PA legislation that allows community-based natural resource management (including community forestry) and specified economic activities within PAs, clarification and strengthening of the legal position concerning the issuing of various types of concessions in PAs, strengthening measures to control illegal trade in wildlife and forest products, clarifying the role of other government ministries and departments in protected area management, and defining sustainable financing mechanisms. These round table discussions will also take into account lessons learned from the field at the project demonstration sites and elsewhere. The working groups will then complete their recommendations for improvements to these policies and legislation for consideration by key stakeholders, and finally submit them to the respective government ministriesand departments.

92. This review process will specifically include: a) enabling policy that ensures PAs have clear access to funds raised through sustainable financing mechanisms (linked to Output 1.4); b) policies that integrate the valuation of ecosystem services with national level land-use planning; c) clarifying the legal status of PA buffer zones and rationalization of approaches toward them (some are inside and some outside PA boundaries); d) clarifying the governance arrangements for coastal PAs (including a stakeholder meeting); and e) the development of enabling legislation that would allow local people to use and benefit from sites within Protected Areas. These will draw on experience provided by **Outputs 1.2, 1.4, 1.5 and 1.6.**

Output 1.2: Capacity of the Forest Department strengthened for effective management of the PA system

93. The capacity of the Forest Department (FD) for effective management of the PA system will be strengthened through a systematic capacity building programme that recognizes trends in its evolution towards current needs, such as forest protection and community involvement. The capacity development will focus on two divisions of the Forest Department, namely the Nature and Wildlife Conservation Division (NWCD) (with primary responsibility for central management of the PA system) and the Training and Research Development Division (TRDD) (responsible for in service training programs and the scheduling of trainings through the Central Forestry Development Training Centers (CFDTC) - the main partner under **Output 1.3**. Improvements in institutional capacity for PA system planning and management will be indicated by the Capacity Development Scorecard (see **Annex 2**) against the baseline and targets set in the Strategic Results Framework. Capacity building for the staff of the demonstration PAs and related subnational Forest Department offices will be covered under **Output 2.2**, taking account of the wider institutional level

support under the current output, and close coordination of the delivery of these two outputs is required during project implementation to ensure management efficiency.

94. Overall, the capacity development will include the following elements:

a) development of a capacity development strategy and action plan for increasing the management effectiveness of the PA system;
b) establishment of PA management standards and PA and individual performance monitoring system for different categories of PAs;
c) incentive mechanisms for increasing the motivation of field staff.;
d) institutionalisation of a modernized reporting structure and methods;
e) establishment of law enforcement and habitat/biodiversity monitoring protocols;
f) establishment and institutionalisation of PA information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities;
g) development of official guidelines for community engagement and co-management.

95. The project's approach towards adopting professional competency standards follows those advocated for PA jobs in SE Asia by the then ASEAN Regional Centre for Biodiversity Conservation (now ASEAN Centre for Biodiversity - ACB)), which developed a book of standards[56] for 24 key protected areas jobs, divided into 17 technical categories and five levels. They were developed through a review of best practice in the ASEAN region and are intended to be adapted as required to meet specific national requirements and training and development contexts[57].

96. A key principle is that the standards are not prescriptive, but are intended to provide a recommended level of competence, and should be adapted and used according to the specific need and context. The standards can support capacity development for protected areas in the following main ways, some of which are addressed in **Output 1.3**:

- Providing a clear description of best practice, based on real regional experience.
- Providing a common language of skills, enabling inter-agency communication and collaboration and improving transboundary and international cooperation.
- Defining functions, job descriptions, terms of reference and forming the basis for appraisals and performance assessments.
- Developing a more performance-based focus for training and development.
- Designing training needs assessments, training strategies and programmes and for developing, delivering and assessing in-service training (**Output 1.3**)
- Revising tertiary education programmes and syllabi and designing new courses at universities and colleges (**Output 1.3**)
- Encouraging institutional ownership of training, enabling Protected Area Authorities to specify more clearly to donors and partners what their training requirements and gaps are (**Output 1.3**)

[56] Appleton, M. R., Texon, G.I. & Uriarte, M.T. (2003) Competence Standards for Protected Area Jobs in South East Asia. ASEAN Regional Centre for Biodiversity Conservation, Los Baños, Philippines. 104pp. Available at http://www.cbd.int/protected/tools/. This is now available in Chinese through the UNDP CO.

[57] For further information, see the ARCBC website www.arcbc.org.ph

- Improving recognition of the complexity and importance of 21st century PA management, encouraging and demonstrating improved professionalism and helping to secure more resources.
- Providing the basis for potential future accreditation of training institutions, agencies, organisations and individuals which use and/or achieve the standards.

97. The standards consist of four main components:
1. Levels : These define five indicative staff levels based on job responsibilities and equivalent (but not required) educational attainment. These levels form the basis for defining the skills requirements for the protected area jobs.
2. Jobs or Occupations: These are 24 typical protected area jobs presented in an indicative organisational chart, based on the organisational charts for protected area authorities in ASEAN Countries.
3. Competences: These define the ideal requirements of competence for 250 skills in 17 categories of protected area work at up to 5 levels. For each category and level the competence consists of three parts: A) Skills: the specific activities in which an individual worker should be able to demonstrate competence at work; B) scope and context: competence in the same skill may be demonstrated in a range of ways, depending on the local conditions; C) Knowledge: competence is not just about skills. There is also a requirement for knowledge and understanding.
4. Standards: The standards define the competences that should ideally be expected for any job. Suggested standards are provided for the 24 jobs defined, but additional standards can be readily created for jobs not specifically listed.

98. The project will form a small working group led by the TRDD, NWCD and PSDivmanagement staff and facilitated by a PA capacity development consultant.The working group would consist of representatives from the TRDD, NWCD, FRI, UoF, WCS and other relevant organizations. This working group will prepare a capacity development strategy and action plan for increasing the management effectiveness of the PA system. It will also reviewthe ASEAN PA competency standards and develop recommendations for their application towards improving professional competencies for the protected area system through their institutionalization and long term use. The project will provide support for adoption of the professional competency standards, including reviewing and advising on job descriptions, and providing training using external providers to address immediate short term needs for implementation of technical activities, such as monitoring and evaluation. Specifically, the application of the ASEAN competency standards can help identify gaps in protected area management positions, gaps in knowledge that can be addressed by modifications in the UoF curriculum (see **Output 1.3**), develop a clear set of guidelines for performance assessment of protected area staff and help develop individual performance monitoring mechanisms. Incentive mechanisms for increasing the motivation of field staff will also be considered by this working group. Annual reviews would be conducted by the project's Technical Advisory Group on Protected Areas(TAGPA).

99. The existing reporting system for the PA system will be reviewed, modernized and institutionalized through the introduction of monthly summary reports to NWCD HQ including SMART patrolling information. This will involve theestablishment and institutionalisation of PA data/information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities, taking advantage of new

information management tools for law enforcement monitoring (SMART[58]) and biodiversity monitoring protocols that will be developed at the demonstration sites under **Output 2.2**.

100. Official guidelines for community engagement and co-management at PAs will be developed by NWCD with technical assistance from the International Landscape Coordinatorand community participation consultant. The guidelines will be informed by an initial review of community partipation in Myanmar's PAs to be conducted by the community participation consultant, as well as international best practice in SE Asia. The guidelines will also specifically take account of the lessons learned from the project's demonstration activities on community participation at the four PAs in **Output 2.3**. The guidelines will be developed through a consultative process involving a wide range of stakeholders

Output 1.3: Training Programmes targeting PA managers institutionalised within the Forest Department

101. The Training and Research Development Division (TRDD), under the Forest Department has oversight of all education and capacity building activities for Forest Department staff. This is carried out through a series of training venues including the Central Forestry Development Training Centres (CFDTC). This division will be the main partner for coordinating training components within the project. Building on existing efforts, a government-led training programme on PA management will be developed, institutionalized and implemented for NWCD including senior PA staff. The training programme will mainstream international best practices in conservation and PA management into the undergraduatelevel teaching programmes of Yezin University of Forestry (UoF) and certificate training level programmes of the CFDTCsand incorporated into their regular curricula. Training will be modelled on course work developed at the Wildlife Institute of India.

102. Baseline assessment of the UoF during the PPG identified the need to diversify the range of forestry disciplines taught and to revise and update the curriculum, among other issues. Its main capacity limitations included the difficulty in recruiting qualified FD staff; limited support and low priority in FD planning; and insufficient capacity to implement comprehensive trainingin Wildlife Conservation and Protected Area Management.Current possibilities for improving capacity included upgrading the current conservation biology syllabus taught at UoF (Protected Area System Management and Wildlife Conservation); identifying subject gaps in the syllabus (which should respond to the ASEAN professional standards described in **Output 1.2**); and importantly, building the capacity of teachers (through a certification course for teachers) who can ultimately teach protected area management and wildlife conservation.

103. A training package for NWCD staff which has been agreed to in principle by the DG. There are totally 650 staff in NWCD and 350 are mainly involved in on the ground PA and wildlife management. The project would design the following courses, the first of which would be implemented at regional/field level and the other two at national/central level:

(1) **Wildlife Conservation Basic Training Course** - intended for lower level Forest Department staff in general, including Forest Guards and Foresters. The training

[58] Spatial Monitoring and Reporting Tool. See earlier description of this approach.

period will be six weeks. All basic knowledge for wildlife conservation such as navigation and map reading, species identification, patrolling and law enforcement, data collection and reporting and international conventions will be included.

(2) **Wildlife Management Advanced Training Course**- designed for middle-level staff such as Rangers and Range Officers. The training period will be four weeks. The contents of the training are: navigation and map reading, PA management, species identification, herbariums and specimen collection and maintenance, planning, ecotourism, awareness and education, policies and laws, CITES and other international conventions.

(3) **Protected Area System Management Course**- developed for the park warden level. It will be a two week training period. It will include PA system management and wildlife management principles, policies and laws, international conventions, etc.

104. The overall process will involve designing the courses and developing the training materials in Y1, testing the courses at CFDTC in Y2-3, and handing the finalized courses over to Yezin UoF in Y4-5. Both the design and delivery of training will be coordinated with other international organizations and associated opportunities. Training materials are in the process of being collected for these trainings, andNWCDsenior staff will contribute towards their development.Potential trainers include qualified staff from FD, NWCD, WCS, and other conservation partners. The project will undertake a gap analysis/needs assessment to ensure that all relevant PA management and biodiversity conservation topics are included in these trainings.The following is a broad list of relevant topics that should be compared with the existing curricula in order to identify gaps:

- Conservation planning for protected area management
- Species and habitat management and monitoring
- Enforcement(SMART enforcement patrolling will be covered at all three levels)
- Controllingwildlife trade
- Education, outreach and awareness
- International agreements related to PAs
- Introductory GIS
- Participatory approaches to managing wildlife.
- Invasive species management
- Emerging issues in conservation: payments for ecosystem services, climate change, REDD+

105. At least 150 PA field staff will be trained in SMART enforcement patrolling and biological monitoring of key ecosystems and threatened species at the CFDTCs.

106. In summary, the following actions will be undertaken to improve capacity for PA management at UoF and the two CFDTCs:

- Strengthen existing courses at UoF by introducing modules relevant to biodiversity conservation and protected area management;

- Build capacity of existing faculty and introduce a teacher training program (a certificate for teachers in conservation science/protected area management);

- Undertake a gap analysis/needs assessment with the proposed NWCD training package to identify topics not covered;

- Develop a certificate program in biodiversity conservation/protected area management;
- Support exchange visits for senior PA system staff for training purposes related to sustainable financing, key policy issues for the PA system and related subjects;and
- Address broader training needs for the FD through the Training and Research Development Division (TRDD), which has the mandate to train the Forest Department and manages the CFDTCs. These could be used to provide specialist and generalist training sessions to deal with specific topics and provide a wider understanding of PAs and conservation needs across the country.

Output 1.4: A system-wide strategy for sustainable financing of the PA networkis developed and piloted for the expanded PA system

107. Working with the Government of Myanmar, activities under this output aim to develop and pilot a system-wide strategy for sustainable financing of the Protected Areas (PA) network in Myanmar, and particularly to increase financing for operational management. It will be closely coordinated with the policy and legal reviews under Output 1.1. The main elements of this approach are as follows, (see also**Annex 8**).

108. ***Develop a system-wide PA financing strategy with the Forest Department of the Government of Myanmar:*** the system-wide PA financing strategy will evaluate options to generate revenues that will cover the management costs of the Myanmar PA network (such as strategies 1-7 in **Annex 8**), and furthermore to demonstrate the broader economic potential of the country's remaining wild areas. The strategy will draw on international models and case studies from within Myanmar to develop a series of options for increased revenue generation from protected areas through non-extractive methods. It will particularly focus on Trust Fund, Ecotourism, PES (especially with hydropower), REDD+ and Forest and Biodiversity Offset models. The strategy will also incorporate modern concepts of community participation in protected area management, benefit-sharing and alternative livelihoods, as a way to reduce core management costs (by promoting increased participation, better legal compliance and reduced conflict) while increasing the contribution of PAs to poverty alleviation and enhancing participation by vulnerable groups. The strategy will serve as an example for other emerging economies looking to reinvest in conservation and transparent sustainable management of natural resources.

109. A participatory process will be followed for developing the sustainable financing strategy, with an expert working group facilitated and guided by international and national sustainable financing specialists. This will aim to build understanding, capacity and collaboration through the process of developing the strategy. The process of developing the sustainable financing strategy will increase awareness of innovative financing models and the need to increase benefit-sharing for communities, develop analytical skills on this topic and build capacity to engage a diverse array of possible financing partners, including the private sector. The process will also build increased collaboration with and understanding by key ministries, including Ministry of National Planning and Economic Development, Ministry of Hotels and Tourism, Ministry of Finance and Revenue, Ministry of Mines and the Ministry of Energy, which all currently have a role to play in the collection and management of various sources of income in relation to forest lands, as well as key land management decisions.

110. Specific studies to be undertaken as part of the strategy development will include:

- An assessment of the resources needed to finance the whole expanded PA system.
- An assessment of the intersection between planned hydropower developments and protection of upstream watersheds by protected areas, in order to develop a business case for hydropower companies to pay for watershed protection.
- An assessment of the potential for tourism in Myanmar's protected areas, including high-end tourism and development of tourism concessions (e.g. for eco-lodges).
- An assessment of the forest carbon values of Myanmar's protected area network.
- Assessment of the government budget system, including cash transfer procedures and audits, in order to assess the potential to scale-up government finance and to provide direct budget support to MOECAF for PA management.

111. ***Develop financing mechanisms mandated under the financing strategy:*** depending upon the results of the financing strategy (see above), the above analyses and work at the demonstration sites in Component 2, the GEF project willdetermine procedural frameworks, mechanisms and policy recommendations (through **Output 1.1**) regarding the identified opportunities. This would enable the government to act on such opportunities (as follows) by building a platform for their uptake:

112. *Trust Fund development*. Development of a PA trust fund would provide dedicated support to PA management in Myanmar, and would hopefully attract financial contributions from various sources, including government, tourism fees, offset or compensation payments and donors. Initial steps in developing a trust fund would include a legal assessment on how to establish a fund; consultations on appropriate governance arrangements, which would need to ensure transparency and effective management of funds in order to attract international finance; consensus-building activities with prospective funders; development of policies and procedures; and finally the actual establishment of the fund.

113. *Development of PES/PWS with the hydropower industry*. Given the high potential for hydropower in Myanmar and the expected rapid growth of the industry over the next few years, payments for watershed protection could be one very viable mechanism to support Protected Area management. Precise opportunities would depend upon the results of the assessment of potential hydropower locations and the PA network (see above). WCS has supported the development of a model in Lao PDR with Theun Hinboun Hydropower Company paying for the management of Nam Kading National Protected Area and Phou Chom Voy Provincial Protected Area, which may be suitable for replication in Myanmar (see **Annex 8**, additional material).

114. *Development of tourism concessions*. Tourism is often promoted as a panacea for conservation, and yet it rarely fulfils these high expectations. However, realistic options for tourism finance will probably exist, such as that already underway at Inle Lake, or eco-lodges at various locations. Development of appropriate fee structures and fund management mechanisms to retain revenues for PA management will be needed[59].See **Annex 8** for examples of community-based ecotourism initiatives.

[59]There is a project with ICIMOD onecotourism in relation to PAs, which has formed a working group including both WCS and NWCD, providing a connection for the sustainable financing side of the present project.

115. *Biodiversity and Forest offset mechanisms*. Biodiversity offsets are a means of generating finance for forest restoration, rehabilitation and conservation. Funding is provided by developers to balance or compensate the residual effects of damages that cannot be mitigated on-site, by investing in equivalent forest resources or habitats elsewhere. Their main application is in relation to the disturbance to forests caused by extractive industries and infrastructure – in Myanmar, possible participants include oil and gas, mining, roads, ports and hydropower sectors. The Thaninthayi Nature Reserve project is one example of an offset mechanism (see **Annex 8**). The project would seek to transfer this approach to other PAs building on the experience at Thaninthayi NR.

116. ***Integrate protected areas into the development of REDD+ in Myanmar and the candidate REDD+ strategies:*** The expansion of the Myanmar PA network to 10% of the land area (the Government target), and the effective management of these PAs, has been identified by the Myanmar REDD+ Roadmap as initial strategies that should be undertaken as part of REDD+ implementation. The GEF project will coordinate closely with the Myanmar REDD+ Working Group and the UN-REDD Programme during the REDD+ Readiness phase to identify synergies and integrate PAs into the candidate REDD+ strategies.

Output 1.5: Sub-national government units associated with the four demonstration PAs incorporate PA values into regional and local development

117. The project will support enhancement of awareness and knowledge on the part of State, Region and local government units in Kachin State and Sagaing Region, on the value of PAs in terms of ecosystem services (especially through PWS and REDD+) and other potential income sources for local communities, drawing on the economic studies in **Output 1.4** and demonstration activities in **Component 2**. This output aims to catalyse local government support for the PA system so that they will be able to incorporate these values into regional and local development and fiscal planning. The project will provide technical assistance in support of sub-regional planning through technical advisors in a landscape coordination unit based in Myitkina who will work with the relevant forestry offices.

118. The reports arising from the economic valuation and sustainable financing studies (see **Output 1.4**) will be designed with the aim of mainstreaming biodiversity conservation and the PA system intonational and sub-national planning processes. Accordingly, a social marketing campaign will be conducted (linked to cofinanced WCS national communications strategy work), providing communication products based on these studies for key audiences associated with the protected areas (primarily policy-makers and planners from the state/region and district government agencies whose practices affect PAs, commercial operators in tourism development (and other sectors), as well as the media). This will aim to establish a clear linkage between the PAs biodiversity / ecosystem services and the associated socio-economic values, such as disaster risk reductionincluding flood mitigation, sustainable water supply, fishery production, forest products, health, and contributions to local economies. Deliverables will include a range of products tailored for different audiences, including publications, media coverage, campaigns, and outdoor events including guided tours to the demonstration sites for these key audiences. Communications and awareness work at the sites will be provided by mobile education teams.

Output 1.6: National PA system expanded based on gap analysis for terrestrial and freshwater ecosystems and PA network review

119. The project will support expansion of the PA systemto secure the minimum necessary areas for biodiversity conservation, and establish an enabling basic framework for increasing the sustainability of the PA system. The project will identify opportunities to increase the coverage of Myanmar's terrestrial PA network managed by the Forest Department to 10% of the country's land-area as highlighted in the Myanmar NBSAP (2011).

120. As States and Regions are increasingly expected to be conducting their own spatial planning, and with the potential of the changing system of government giving more autonomy in planning and development activities to the States and Regions, there is a clear need to support PA development to consider State and Regional level conservation priorities. These priorities could include ecosystem service protection especially watersheds (see **Output 1.5**) as well as locally significant populations of wildlife. The PA network also plays a substantial role in climate change adaptation.

121. To build a more comprehensive and representative protected area system, a gap analysis was conducted during project preparation for terrestrial ecosystems, including a review of the national PA network based on ecoregion and species representation, threats, system design and climate change adaptation[60] (see **Annex 1** for the PA gap analysis). The gap analysis provides a strategic basis towards meeting the national government's target of 10% coverage of protected areas by 2030 (and the CBD's post-2010 target of 17% protection of terrestrial areas plus 10% of coastal areas by 2020) including comprehensive representation of ecoregions and key species. It identified the following priorities. The 10% target would cover all the KBAs identified in the NBSAP and MBCIV, yet there is a need to identify areas beyond this such as biological corridors and areas of high importance for the provision of ecosystem services (eg catchment areas related to HEP development).

122. High priority areas for further protection include:

- The finalization of the proposed PAs across Taninthayi Region in the Tenasserim-south Thailand semi-evergreen rain forest ecoregion
- The gazettement and protection of the potential Imawbum PA in eastern Kachin State, which would cover a large portion of the Nujiang Langcang Gorge alpine conifer and mixed forest ecoregion within Myanmar.
- The recognition of potential additional PAs within the Kayah-Karen montane rain forest ecoregion

Note: although both Taninthayi Region and Kachin State are already relatively well covered by PAs, their global and national importance warrants this high level of coverage.

123. An additional high priority area is Myanmar's extensive coastal zone. This area is currently relatively poorly covered by existing PAs, primarily because of the complications associated with management of coastal areas - especially the general lack of forests controlled by the Forest Department combined with high populations and unclear

[60] See:Rao M, Saw H, Platt SG, Tizard R, Poole C, Than Myint, Watson JEM. 2013. Biodiversity Conservation in a Changing Climate: A Review of Threats and Implications for Conservation Planning in Myanmar. AMBIO 2013, 42:789–804. DOI 10.1007/s13280-013-0423-5.

responsibilities between the Department of Fisheries and the Navy for the protection of offshore resources. This includes the Myanmar coastal mangrove, Myanmar coastal rain forest, and tropical and subtropical moist broadleaf forests ecoregions. A review of coastal PA policy options has been included in **Output 1.1** in order to address the governance issues related to this gap, which will include a stakeholder meeting.

124. Medium level priorities include increasing levels of protection within the relatively under-protected ecoregions in the most populated parts of the country (Chin Hills-Arakan Yoma montane forest, Irrawaddy dry Forest, Irrawaddy freshwater swamp forest, Irrawaddy moist deciduous forest, Northern Indochina subtropical forest). Further protection should focus on protecting ecosystem services as well as globally threatened species that are not currently found within the PA network. The existing small PAs are potentiallyunable to protect species and ecosystem services in the long term, therefore more careful planning in the Dry Zone, Chin Hills, Ayeyawady Delta and Shan Plateau will be needed to incorporate longer-term ecosystem and species conservation into their existing development plans.

125. Coverage of the Northern Triangle sub-tropical forest, Mizoram-Manipur- Kachin Rain forest, and the Eastern Himalayan alpine shrub and meadow are potentially already sufficient if managed well.

126. Based on the identified gaps,biological and social ground-truthing surveys will be conducted for areas of conservation value. Once areas of conservation value are identified, a cooperative process will begin to identify potential areas for PA creation. This process will follow the existing Forest Department instructions regarding the creation of reserved forest and protected areas. This includes the establishment of a land settlement committee and the recognition of existing land holdings in relation to PA boundaries. Approval from local stakeholders beginning at the village level and on to township, district and state or region are all required prior to submission to the Cabinet of the President for final gazettement of the PA.

127. The PA gap analysis will be published internationally and NWCD delegates supported to attend and present it at the IUCN World Parks Congress in November 2014 with cofinanced support. The project will provide technical assistance for reporting to CBD, especially with regard to the PA system[61].

Component 2: Strengthened management and threat reduction in the target PAs and buffer zones

(Total Cost: USD 7,873,273; GEF USD 3,873,273; Co-financing USD 4,000,000)

128. This component will focus on strengthening PA management effectiveness on the ground. These interventions will cover two of the Priority Conservation Corridors identified in the Myanmar NBSAP and updated by the Myanmar Biodiversity Conservation Investment Vision (MBCIV) multi-stakeholder process in January 2012. These Conservation Corridors include one of Myanmar's two Tiger Conservation Landscapes (TCLs). Activities will be implemented across four priority PAs that reflectthe Key Biodiversity Areas identified by the NBSAP and MBCIV process and priority PAs as identified in the NTRP: Hkakaborazi NP, Hponkanrazi WS, Htamanthi WS and Hukaung Valley WS. Sustainably Managed

[61] Note: The NBSAP updating process has been supported by UNEP/GEF Enabling Activity Project 3407, so not included here.

Landscapes (SMLs) will be defined by the political, ecological and opportunity context around thesedemonstration PAs. For further information about the demonstration PAs, see **Table 2**and **Figure 2**(Introduction to Project Site Interventions), the PA profiles in **Annex 6** and PA stakeholder workshop reports in **Annex 7**.

The project will develop a range of activities aiming to strengthen management effectiveness andaddressing key threats across the demonstration PAs. It will strengthen management through sustainable financing including development of site business plans, integrated reporting across multi-year plans, promoting legal recognition of the management plans, review and rationalization of buffer zones, and inclusion of stakeholder participation in site activities with proactive attention towards gender and minority involvement. (**Output 2.1**).

129. PA site operations will be strengthened to address key barriers and respond to existing threats to biodiversity (**Output 2.2**), through: (i) strengthening of enforcement targeting illegal harvesting, poaching, mining, and encroachment through operationalisation of the SMART patrolling and law enforcement monitoring system; (ii) park boundary demarcation in key areas to reduce encroachment problems; (iii) staff training tailored to improve knowledge and skills of PA staff and local partners to manage specific threats to the PAs; and (iv) management infrastructure consolidation (signage, patrol camps, equipment etc).

130. In addition, pilot systems for community participation will be developed and implemented at the four demonstration PAs (**Output 2.3**). The pilot systems will aim to establish sustainable mechanisms for the participation of local stakeholders, especially local communities, in PA management processes. These will include piloting site stakeholder committees for each of the demonstration PAs, training and education on climate change adaptation and the inclusion of community-based adaptation in community participation strategies, and development of community based resource management plans and linkages to other projects. Specific locally-based threats at the demonstration PAs will be addressed through appropriate community involvement processes that target communities in the concerned areas, including awareness programmes, development of alternative livelihoods and incentive measures.

131. The project would undertake a pilot intervention to analyse patterns and distribution of illegal wildlife and timber trade in and around the target PAs within Kachin State, in order to reduce external threats to the PAs. Workshops would be held in selected local communities that are hotspots for wildlife and/or timber trade in townships including Hkakaborazi, Hponkanrazi and part of Hukaung Valley to identify the drivers of wildlife and timber trade, local trade chains, and trade dynamics and seasonal patterns. Information from the workshops would be used to formulate specific conservation outreach and trade monitoring actions for reducing impacts of overharvest and illicit trade, and feed into a Law Enforcement Action Plan (LEAP) for Kachin State (**Output 2.4**). This approach could be replicated for other regions if proven useful.

132. A monitoring and evaluation system will be developed for the demonstration PAs (**Output 2.5**) that, after official review, will form the basis for a PA system M&E system for NWCD. It will include a full range of ecological, socio-economic and financial indicators that will provide the PA management and project team with measures of success and form the basis for adaptive management. Monitoring is included in the site management plans but needs to be linked more explicitly to management measures in order to achieve effective adaptive management. This will include development of a system for monitoring ecosystem

functions and socio-economic conditions in community managed areas within PAs, and development of a database management system will be developed for input of field data and analysis of results at landscape level, with annual meetings to share results and lessons learned.

133. Existing models will be expanded from advanced PAs (such as Hukaung Valley WS) to those with few to no current activities within the target landscape. New models will also be built based on the existing activities at more advanced PAs to increase capacity and inform policy and land use decisions. To promote sustainability and the expansion of best practices pilot management activities will be incorporated into central level learning networks and gradually expanded to PAs nationwide and sustained.

134. The **expected conservation outcomes** of this component will include improvements in habitat conditions and species conservation, a reduction in rates of encroachment and the occurrence of other threats at the four demonstration PAs associated with more effective management, increased awareness and participation of local communities in PA management, and more secure financing to support PA management operations. The outputs necessary to achieve this outcome are described below.

Output 2.1: Strengthening management through business plans for the four demonstration PAs

135. Five-year management plans for the project demonstration sites are under development (Hukaung Valley WS Hkakaborazi NP and Htamanthi WS), while Hponkanrazi WS is currently managed from Hkakaborazi WS. The project will therefore seek to strengthen management through sustainable financing including development of business plans, integrated reporting across multi-year plans, and legal recognition of the management plans in order to provide stronger protection.In order to improve management effectiveness, the aim is to introduce participatory results-based management for the demonstration sites, including monitoring, review and updating mechanisms. Participation is an important element of the approach, including the involvement of local communities and gender considerations in planning processes for the development and revision of management plans, as well as in their implementation processes. Thus, revisions to the management plans will take account of the site stakeholder inputs (e.g. see the workshop reports in **Annex 7**), recommendations for community, gender and minority representation, and community participation strategy (**Annex 10**).

136. The management plans will overtly recognize the key values and roles of the demonstration sites, as potential World Heritage Sites (Hkakaborazi NP; and Hukaung Valley WS), Tiger Conservation Landscapes (Hukaung Valley WS and Htamanthi WS), water catchment areas for planned downstream hydro-electric programmes (Hkakaborazi NP and Htamanthi WS) and potential areas for ecotourism development, connecting to sustainable financing opportunities.

137. The management zones for these demonstration PAsare described in the management plans, and will be reviewed and rationalized as necessary in line with operational needs to achieve management objectives. In view of the external pressures on these large PAs, model buffer zones will be strengthened where pressures from surrounding human populations and economic development are most intense, for instance at Hukaung Valley WS, where the geographical setting and unusual configuration of the reserve boundaries coupled with

intense mining and plantation development activities are impacting natural resources. This will be addressed by participatory land use governance and planning processes coupled with community engagement, and supported by appropriate sustainable livelihood options such as nature-based tourism and community business enterprises (see **Output 2.3** and **Annex 8** on sustainable financing for examples) and integration of PA management with regional planning (to take account of watershed protection, for example), thus maximizing development opportunities from ecosystem services, tourism etc.

138. The pilot demonstration and assessment of diversified financing sources for PA management will be based on management needs-based PAbusiness plans developed for the four target PAs, identifying PA management costs and defining revenue options that are additional to government PA budgets, and mobilising market opportunities. Implementation of the site level business plans will be supported by the project. To demonstrate potential sustainable financing approaches, revenue generation opportunities will be identified, assessed and where feasible implemented in the four demonstration PAs. These will take account of the economic valuation and sustainable financing studies conducted under **Output 1.4** and could include REDD+, ecotourism, wildlife friendly products, NTFPs or other income generation opportunities based on the local context. The business plans will be incorporated into the PA management planning cycle to ensure operationalisation.

139. Potential opportunities for sustainable financing based on the local situations at each of the four demonstration PAs are as follows: PES (watershed services) at Hkakaborazi NP and Htamanthi WS; sustainable tourism (all four sites, but especially Hponkanrazi WS); biodiversity offsets (Htamanthi WS for dry season access to a gas well; and Hukaung Valley WS in relation to mineral extraction).

140. The detailed design of the sustainable financing mechanism to be demonstrated at each demonstration PA will be undertaken during the full project based on the results of the mentioned studies, and in line with STAP guidance documents[62]. The data collection and analysis to develop the sustainable financing mechanism will be incorporated into the site business plans. The site business plan identifies the amount of financing required in a long-term financial plan required to implement the activities in the management plan; and the potential revenue sources to meet those needs (including cost savings). The business plans should be integrated with the site management plans. A small team should be tasked with developing the business plan at each site, including the PA Manager (warden), Financial Officer, government agency representatives (FD, NWCD) and management planning team representatives, facilitated by a sustainable financing consultant.

Output 2.2: Demonstration PA site operations strengthened to address existing threats to biodiversity

[62]STAP. 2010a. Payments for Environmental Services and the Global Environment Facility: A STAP advisory document. http://www.thegef.org/gef/sites/thegef.org/files/publication/STAP_PES_2010.pdf

STAP. 2010b. The Evidence Base for Community Forest Management as a Mechanism for Supplying Global Environmental Benefits and Improving Local Welfare: A STAP advisory document http://www.thegef.org/gef/sites/thegef.org/files/publication/STAP_CFM_2010.pdf

141. Building on existing management capacity at the sites and related WCS programmes (see the site profiles in **Annex 6**), PA site operations will be strengthened to address existing threats to biodiversity, through the following activities. In order to maximize efficiency and opportunities for sharing of experience between sites, capacity building activities will be conducted jointly for several sites where appropriate.

142. ***Strengthening of enforcement[63]through design and piloting of the SMART patrolling and law enforcement monitoring systemfor all four demonstration PAs:***Protected area management in Myanmar has benefited over the last decade from focused efforts to increase field ranger capacity for law enforcement and law enforcement monitoring (LEM) at selected conservation sites: Hukaung Valley Wildlife Sanctuary, Hkakaborazi National Park, Taninthayi Nature Reserve, and Alaungdaw Kathapa National Park. These efforts involved intensive field based training exercises run by the regional and national conservation trainers from WCS, supported by the US Fish and Wildlife Service, CITES MIKE, the Blue Moon Fundand other donors. As a result of these training initiatives, a core group of trained wildlife enforcement personnel is now available for patrolling and monitoring key protected areas. Talented individuals from these sites and from WCS will be recruited to train staff at each of the target sites. Training will cover a range of topics important for field enforcement staff working in protected areas. For instance, knowledge of both national law and locally-applicable customary laws and traditions will be needed for culturally sensitive law enforcement. Patrol strategies and techniques that have been used successfully in other places will be adapted for the target sites.

143. At the heart of a successful law enforcement programme is a conscious process for achieving incremental improvements in the quality of enforcement interventions. This will be done through implementation of standard patrol reporting protocols that are designed to be simple for the field ranger to use. Periodic evaluation of the results of patrols and investigations will be done, along with discussion with enforcement staff of strengths and weaknesses of efforts, consideration of options for improvement, setting and resetting of patrol priorities and targets. The process is called Adaptive Patrol Management (APM), linking to the reporting process associated with site management plan implementation. It allows patrolling activities to be accurately targeted towards seasonal changes in land use that may impact the PA.

144. APM will be achieved through implementation of the Spatial Monitoring and Reporting Tool (SMART). SMART is an interactive, spatially explicit system for managing and analysing law enforcement monitoring data. It was developed out of a need for a site-based tool that conservation area managers can use to adaptively manage their own enforcement operations[64]. SMART is a simple to use, open-sourced programme that inputs field observational data on incidents and patrol efforts collected by rangers, and outputs information on levels and trends in threats, performance of patrol teams and individual staff, and gaps in patrol coverage[65]. Anecdotal data such as intelligence reports from informants or community volunteers can be incorporated in the database. SMART can be used to plan patrols to focus on problem hotspots or fill gaps in coverage. In the context of the LEAPfor Kachin State (**Output 2.4**), it will be used by managers of target sites to monitor trends in threats to forests and wildlife, plan enforcement operations, monitor staff performance, and

[63]patrol, surveillance, interception of malfeasance and prosecution
[64]Stokes, E. (2010) Improving effectiveness of protection efforts in tiger source sites: developing a framework for law enforcement monitoring using MIST. *Integrative Zoology*,**5,** 363-377.
[65]smartconservationsoftware.org

demonstrate effectiveness. See SMART baselines for three of the demonstration PAs in **Annex 9**.

145. ***PA boundary demarcation in order to reduce encroachment:*** The boundaries of all four demonstration PAs have been established and are described in the site profiles in **Annex 6**. The weak recognition of PA boundaries will be addressed through co-financed support for detailed surveying and demarcation of boundaries using signs / marker posts, and associated awareness raising programmes to ensure that local communities understand the regulations governing resource use inside the boundaries, the rationale for these regulations, and the reserves' interest in introducing more participatory approaches to management. The status of boundary demarcation varies between reserves but priority will be placed on areas of land use conflict or dispute and specific threats.

146. ***Staff training tailored to improve knowledge and skills of PA staff and local partners to manage specific threats to the PAs.***This activity will be coordinated with the national capacity development work planned under **Output 1.2**, which will focus on NWCD staff and key PA staff. During project preparation, a capacity development scorecard baseline was completed for the related state/region forest offices (Sagaing and Kachin), which will be included in the training and capacity development activities. The effectiveness of training delivery will be assessed by post-training questionnaires completed by participants, and repeat assessments for the capacity development scorecard at project mid-term and completion.

147. The baseline assessment indicated that existing capacity for PA planning and management is weak and insufficient. Analyzing the gaps in the tools and skills necessary for PA management will be a first step towards enhancing capacity. Therefore, training at the site level will be based on a training needs assessment for each PA, in the context of the ASEAN professional competency requirements for PA staffing positions determined in **Output 1.2**. The framework for capacity building at site level will be planned with NWCD to address key skill needs, such as public relations, responding to emerging challenges, community outreach and engagement, visitor management, etc, and delivered through training programmes under**Output 1.3**in order to be replicable throughout the PA system.

148. ***Essential Site Management equipment and facilities (signage, patrol camps, equipment etc):*** In view of the very difficult conditions prevailing at the demonstration sites – they are very remote and rugged, with poor road access and very limited public infrastructure, the lack of adequate management facilities and equipment represents a major constraint for effective management of these large forested areas. The project will therefore ensure that site management is supported by the necessary facilities and equipment to undertake the tasks specified in the management plans effectively.

149. The existing management facilities and staffing at the four demonstration PAs is summarized in the PA profiles in **Annex 6**. From this it can be seen that there are significant variations in facilities between the individual PAs, with Hukaung Valley WS and Hkakaborazi NP being most well established, followed by Htamanthi, while Hponkanrazi has effectively no staff and no facilities.

Output 2.3: Pilot systems developed and implemented for community participation at the four demonstration PAs

150. During project preparation, stakeholder workshops were convened for each of the four demonstration protected areas (Hponkanrazi WS was covered during the workshop for neighbouring Hkakaborazi NP). The workshops sought views from the various groups of stakeholders represented on issues including the threats facing each PA; PA operations including patrolling and law enforcement, conservation education, CBNRM, research, and village development activities; community participation in conservation activities, communication mechanisms between the PA and communities, and collaboration between relevant departments and organizations and the PA, etc. (see **Annex7** for workshop reports). Based on this preparatory work, the project has developed a community participation strategyincorporating minority and gender considerations (see **Annex 10**) that would be used to develop and implement pilot systems for community participation in PA management at the four demonstration sites. Building the awareness of site staff is also recognized as an important need at this level.

151. The pilot systems will seek to put in place sustainable mechanisms for the participation of local stakeholders, especially local communities, in PA management processes. Specifically, these will pilot the establishment of site stakeholder committees for each of the demonstration PAs to inform, advise and coordinate activities, with the long term aim of institutionalizing them.These will contribute to the overall sustainability of PA management, reduction of locally based threats such as encroachment, and increased benefits to local communities and other stakeholders. The pilot systems will also include training and education on climate change adaptation and the incorporation of community-based adaptation in community participation strategiesin order to decrease vulnerability to climate change through safeguarding access to natural resources and promoting livelihood opportunities. The pilots will also include development of community based resource management plans and linkages to other projects.

152. In addition, specific locally-based threats identified at individual demonstration PAs will be addressed through appropriate community involvement processes that target communities in the concerned areas, including awareness programmes, development of alternative livelihoods and measures such as conservation agreements[66] that provide incentives to reward improved management practices (such as not encroaching into particular areas). The incentive scheme / conservation agreements will provide benefits in return for improved management and maintenance of habitats and wildlife populations (measured in Output 2.5) to encourage the concept of ‘ownership’ and the value of the wildlife resource. On-going evaluation of the incentive scheme will be conducted for adaptive management. This evaluation will include collection of data on community livelihoods, which will be used to monitor the impact of the project on local people. Through the use of incentive schemes and land use planning at potential eco-tourism sites, the project aims to mainstream biodiversity into the tourism sector.

153. Threats impacting the demonstration sites identified during project preparation that may be addressed through this approach are as follows:

[66]There is currently no legal basis for agreements between the PA authorities and communities, but the introduction of new policy and regulatory framework in Output 1.1 will seek to address this constraint. Pilot experience at the demonstration sites will seek to inform this policy development.

- Hukaung Valley WS: Conversion of forest to plantations and other crops, human encroachment, conversion of wetland habitats
- Htamanthi WS: Pollution, human encroachment, mineral extraction, conversion of wetland habitats
- Hkakaborazi NP: Commercial over-exploitation of animals and NTFPs, subsistence over-exploitation of animals, shifting cultivation
- Hponkanrazi WS: Commercial over-exploitation of animals and NTFPs, subsistence over-exploitation of animals, agricultural expansion, human encroachment, shifting cultivation

Output 2.4 Analysis of drivers and planning for forestry and wildlife law enforcement in Kachin State

154. Information on the distribution of hunting, wildlife trade and logging offences in the Northern Forest Complex is available for Hkakaborazi and Hukaung Valley Wildlife Sanctuaries from ranger patrols and roadblocks conducted since 2005. However, the drivers of wildlife/ forest crime are yet to be fully understood at either site as no detailed analysis is available, and management interventions would be more effective if informed by such knowledge.

155. The project would undertake an intervention to analyse patterns and distribution of illegal wildlife and timber trade in and around the target protected areas in Kachin State[67], in order to reduce their impacts on the demonstration PAs and biodiversity. Workshops would be held in selected local communities that are hotspots for wildlife and/or timber trade in townships including Hkakaborazi, Hponkanrazi and part of Hukaung Valley. The workshops would involve facilitated discussions with village headmen, local business leaders, township forestry and other local authorities, and would identify the drivers of wildlife and timber trade and specific local trade chains and actors, from poacher through middlemen to the market place, and generate specific information on trade dynamics and seasonal patterns. Information gained from the workshops would be used to formulate specific conservation outreach, and trade monitoring actions for reducing impacts of overharvest and illicit trade, and feed into a landscape-level Law Enforcement Action Plan (LEAP) for Kachin State.

156. As part of an effort to develop imperatives for conservation and government capacities for environmental management, this project will coordinate with related initiatives involving such as ASEAN WEN, TRAFFIC and appropriate organizations in China in order to facilitate support for forest and wildlife law enforcement Kachin State. An assessment of drivers of deforestation and forest degradation, and wildlife trade will be conducted to identify priorities for law enforcement at township, district and state levels.

157. The 5-year Law Enforcement Action Plan (LEAP) for Kachin State will seek to reduce or stop deforestation and forest degradation, and unsustainable harvest of wildlife and other forest resources across forest categories, inside and outside of the protected areas through a programme that will incorporate regional initiatives for wildlife trade and international best practices for law enforcement,including;

[67]The project will focus on Kachin State as a demonstration of the LEAP approach for one administrative unit. If successful, it could be replicated in other states/regions subsequently.

1. Strengthen the evidence base for wildlife trade interventions
2. Focus on emerging wealth as the more important driver of illegal and unsustainable wildlife trade than poverty
3. Design of wildlife trade interventions to take into account the broader conditions and trends that act to drive illegal and unsustainable wildlife trade
4. Design effective implementation and law enforcement mechanisms, and address wider issues of governance
5. Promote use of non-regulatory approaches for controlling illegal and unsustainable trade, e.g. market-based interventions and support for improvements in resource management
6. Awareness efforts to reduce illegal and unsustainable trade targeting specific audiences with effectiveness evaluated over time
7. Co-ordinated packages of mutually reinforcing interventions to address illegal and unsustainable wildlife trade in a more comprehensive manner
8. Increased attention and investment is required if wildlife trade is to be brought within sustainable levels and conducted according to national and international trade controls
9. Promote interagency collaboration for the implementation of forestry and wildlife enforcement

The LEAP will help prioritize threats, organize and strengthen the implementation of wildlife and forest law enforcement using three approaches; (1) preventative interventions that lead to increased compliance and reduced need for enforcement, (2) increasing the detection of forest offences and identifying violators, and (3) reducing illegal activity to manageable levels. Core components of the LEAP will include the development of coordination, communication and exchange mechanisms, as well as an operational structure for enforcement implementation. It will also cover enforcement strategy and tactics, training and capacity development, enforcement policy and monitoring effectiveness. Implementation of LEAP will be led by the Forest Department and involve strategic partnerships with state governments, Police, Army, Customs at all levels of administrative organization in Kachin State.

Output 2.5 Increased capacity for monitoring, assessing and reporting the impacts of improved PA management on ecosystems, key species, threats and local livelihoods

158. A monitoring and evaluation system will be developed for the demonstration PAs that, after official review, will form the basis for a PA system M&E system for NWCD. It will include a full range of ecological, socio-economic (including gender) and financial indicators that will provide the PA management and project team with measures of success and form the basis for adaptive management.

159. Building on WCS programmes in the area, the project will support capacity building for the staff of the demonstration PAs to undertake field surveys, monitoring and evaluation of key biodiversity features in each PA. This work will initially be required to achieve an adequate inventory of the conservation values of each PA (habitats, species, landscape features), as well as improved understanding of wildlife habitat requirements in support of management plan development.

160. Monitoring is included in the site management plans but needs to be linked more explicitly to management measures in order to achieve effective adaptive management.

Background ecological monitoring is required as well as targeted monitoring for specific features and threats facing the PA. Capacity will also be developed for participatory monitoring involving local stakeholders, as a means of providing them with a role in site management, improved understanding of conservation issues and incentive to support conservation goals.

161. A system for monitoring ecosystem functions and socio-economic conditions in community managed areas will be established and will provide relevant scientifically-based information on the state of ecosystems and livelihoods in relation to sustainable use (e.g. for the 17 villages occurring within Hkakaborazi NP). Special attention will be given towards the role of ecosystems for climate change adaptation, mitigation, the statusof endangered species, and the value of ecosystem services for women and general community wellbeing.

162. The success of project interventions at each demonstration site will be assessed by the monitoring of indicators included in the respective site management plans, which will include biological populations of key species, the extent of key habitats, the level of human activities identified as threats, community livelihood indicators, and the extent of government support at local, subnational and national levels (through government plans, reports and proclamations).

163. A database management system will be developed for input of field data and analysis of results, supported by the Landscape Coordinator positions. Training in data collection and analysis techniques will ensure that there is sufficient capacity for subnational and site staff and stakeholders to understand the results of the monitoring program and the implications of these results for project activities.

164. Finally, annual meetings will be convened to share monitoring results and lessons learned among the four demonstration PAs and central/national staff to facilitate learning and comparison of experiences.

PROJECT INDICATORS

165. The project indicators contained in **Section II / Part II (Strategic Results Framework)** include only impact (or 'objective') indicators and outcome (or 'performance') indicators. They are all 'SMART'[68].

166. The project will also need to develop a certain number of process-oriented indicators to compose the 'M&E framework' at the site level, and the establishment of such a framework has been integrated into the design of Component 2, in particular **Output 2.5**. This site-level framework will include the incorporation of a wide range of indicators in site management plans, in law enforcement monitoring plans, community participation and development programmes, and the development and operationalisation of monitoring systems for key ecosystems and threatened species. A selection of these site-level indicators will also feed into the project's overall M&E framework. It is envisaged that the project's overall M&E framework (see **Part IV** below) will build on UNDP's existing M&E Framework for biodiversity programming.

[68]Specific, Measurable, Achievable, Relevant and Time-bound.

167. The organisation of the logframe is based on the general assumption that: *if* (Outcome 1)enhanced systemic, institutional and financial frameworks are established for PA expansion and management; and *if* (Outcome 2) strengthened management and threat reduction is achieved in the target Pas and buffer zones; *then* (Project Objective) the terrestrial system of national protected areas for biodiversity conservation will have been strengthened through enhanced representation, management effectiveness, monitoring, enforcement and financing. This logic is based on the barrier and root-cause analysis carried out during the PPG phase (refer to Section I, Part I, chapter 'Long-term solution and barriers to achieving the solution').

168. In turn, the choice of indicators was based on two key criteria: (i) their pertinence to the above assumption; and (ii) the feasibility of obtaining / producing and updating the data necessary to monitor and evaluate the project through those indicators The following are therefore the project's key indicators:

Table 4. Elaboration of Project Indicators

<table>
<tr><th>INDICATOR</th><th>EXPLANATORY NOTE</th></tr>
<tr><td colspan="2">At objective level - Strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing</td></tr>
<tr><td>O.1.Increased coverage of Myanmar's terrestrial and aquatic PA network managed by the Forest Department to 10% (6,765,530 ha) of the country's land-area from the current 5.6% (3,788,697 ha) with increased coverage of under-represented ecoregions and essential corridors (see inset table)</td><td>
<table>
<tr><th>Ecoregion</th><th>Current % Protected</th><th>Target % Protected</th></tr>
<tr><td>Chin Hills-Arakan Yoma montane forest</td><td>3.60%</td><td>3.60%</td></tr>
<tr><td>Eastern Himalayan alpine shrub and meadow</td><td>96.46%</td><td>96.46%</td></tr>
<tr><td>Irrawaddy dry Forest</td><td>0.45%</td><td>3.0%</td></tr>
<tr><td>Irrawaddy fresh water swamp forest</td><td>0.04%</td><td>Potential to increase limited</td></tr>
<tr><td>Irrawaddy moist deciduous forest</td><td>1.82%</td><td>3.0%</td></tr>
<tr><td>Kayah-Karen montane rain forest</td><td>0.60%</td><td>1.5%</td></tr>
<tr><td>Mizoram-Manipur- Kachin Rain forest</td><td>7.26%</td><td>7.26%</td></tr>
<tr><td>Myanmar Coast mangrove</td><td>0.92%</td><td>3.0%</td></tr>
<tr><td>Myanmar coastal rain forest</td><td>0.69%</td><td>Potential to increase limited</td></tr>
<tr><td>Northern Indochina subtropical forest</td><td>0.90%</td><td>Potential to increase limited</td></tr>
<tr><td>Northern Triangle subtropical forest</td><td>35.56%</td><td>35.56%</td></tr>
<tr><td>Nujiang Langcang Gorge alpine conifer and mixed forest</td><td>0.00%</td><td>3.0%</td></tr>
<tr><td>Tenasserim-south Thailand semi-evergreen rain forest</td><td>5.16%</td><td>25.00%</td></tr>
<tr><td>Tropical and subtropical moist broadleaf forests</td><td>6.04%</td><td>6.04%</td></tr>
</table>
Progress in expanding coverage of Myanmar's ecoregions by the PA system will be tracked through official information from MOECAF on the creation, extension and upgrading of protected areas, in comparison with a GIS base map showing the distribution of ecoregions across the country. GIS analysis at project completion will confirm actual changes in coverage achieved against the project's targets (see inset table above).
</td></tr>
<tr><td>O.2.</td><td></td></tr>
</table>

<table>
<tr><th>INDICATOR</th><th>EXPLANATORY NOTE</th></tr>
<tr><td>Improved habitat conditions at local level indicated by percentage change in forest cover and encroachment in Core Areas of PAs measured through remote sensing three times during the project.</td><td>
<table>
<tr><th>Protected Area</th><th>Baseline forest cover[69] (% change / year)</th><th>Target forest cover (% change / year)</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Hkakaborazi National Park</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
</table>

See inset table for baseline and target annual rate of change in forest cover caused by encroachment by PA. In the absence of PA-specific baseline data, the national average rate of deforestation has been applied. During implementation, GIS/RS analysis will generate PA-specific information on forest cover for assessments at project inception, midterm and completion.
Note that baseline rates of change in forest cover are not available for the four demonstration protected areas. The national average rate of 0.95% has therefore been used as a proxy. The baseline rates for the demonstration PAs should be updated during project inception based on the 2013 forest cover map due for publication by 2015.

</td></tr>
<tr><td>O.3.Financial Sustainability of PA System (See Annex 3)</td><td>This indicator is based on the GEF Financial Sustainability Scorecard for protected area systems (see Annex 3). The baseline score during PPG is 15% of the possible total, with a target of 25% set for project completion. The scorecard assessment should be carried out at project midterm and project completion.</td></tr>
<tr><td colspan="2">At Outcome 1 level – Enhanced systemic, institutional and financial frameworks for PA expansion and management</td></tr>
<tr><td>1.1. Strengthened national policies and legislation address specified key issues for the PA system.</td><td>1.1.Strengthened national policies and legislation address the following key issues for the PA system:
a) enabling PAs to have access to funds raised through sustainable financing;
b) integrating valuation of ecosystem services (ES) into national land use planning;
c) clarifying the legal status of PA buffer zones and rationalization of approaches toward them;
d) clarifying the governance arrangements for coastal PAs; and
e) enabling local people to use and benefit from sites within Protected Areas.
The project will support review and stakeholder consultation procedures covering each of these key issues in order to develop recommendations for policy and legislation improvements. Adoption of recommendations will be verified through official MOECAF reports and reports of related government agencies.</td></tr>
<tr><td>1.2.Improved institutional capacity of the Forest Department for the PA system planning and management as indicated by the Capacity</td><td>The capacity of five units of the Forest Department - NWCD, Sagaing Region, Kachin State, the Training and Research Development Division and the Planning and Statistic Division were assessed using the UNDP PA Capacity Development Scorecard and baselines established during the PPG. A combined adjusted average score for these five units was used as a baseline indicator (although the individual scores can also be seen in Annex 2, together with comments). A combined average target score of 67% was set for the end of project target.</td></tr>
</table>

[69]Baseline rates of change in forest cover are not available for the four demonstration protected areas. The national average rate of 0.95% has therefore been used as a proxy. The baseline rates for the demonstration PAs should be updated during project inception based on the 2013 forest cover map due for publication in 2014.

INDICATOR	EXPLANATORY NOTE
Development Scorecard (see **Annex 2**)	
1.3.Certificate-level PA management modules are established for the use of the Forest Department and incorporated into their regular curricula at Yezin University of Forestry and Central Forestry Development Training Centers as appropriate	▪ This indicator records the establishment and incorporation of certified PA management modules in the regular curricula at Yezin University of Forestry and Central Forestry Development Training Centres, according to official communications from these bodies. ▪ It also records the number of FD staff that have been trained and certified through formal training courses in Conservation Management and Community Outreach for Protected Areas including SMART enforcement patrolling[70], biological monitoring of key ecosystems and threatened species, techniques for community-based conservation and environmental education at the CFDTCs (target of 150 FD field staff).
1.4.100% increase in total budget allocated to the protected areas in real terms compared to the baseline as indicated by the financial sustainability scorecard (see **Annex 3**).	▪ Assessment of the total budget allocated to the PA system using the financial sustainability scorecard (see **Annex3**) at project completion, compared with the baseline recorded at PPG.
At Outcome 2 level – Strengthened management and threat reduction in the target Pas and buffer zones	
2.1.Reduction	**SMART Target***

[70] SMART (Spatial Monitoring and Reporting Tool) patrol system developed by WCS and partners globally is based on an established tool called Management Information System (or MIST). MIST allows rangers on field patrol to use handheld GPS devices to record geospatial and metadata information about encounters with poachers, snares, and other types of disturbance and encroachment in the protected area. Rangers also collect information about sightings or signs of key species they encounter.The field data is subsequently downloaded from the GPS device to a central computer where it is aggregated as a local and/or national level dataset. This compiled data gives protected-area managers and other conservation stakeholders an unparalleled 'big picture' view of where resources are most needed and where they can most effectively be deployed.

<table>
<tr><th>INDICATOR</th><th>EXPLANATORY NOTE</th></tr>
<tr><td>of threats at the local level indicated by an eventual reduction in the number of individuals stopped inside the PA for illegal activities as shown in SMART monthly patrolling reports.</td><td>
<table>
<tr><th>Protected Area</th><th>SMART Baseline*</th><th>Y1</th><th>Y2</th><th>Y3</th><th>Y4</th><th>Y5</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
<tr><td>Hkakaborazi National Park</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary</td><td>0</td><td>10</td><td>20</td><td>15</td><td>8</td><td>5</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
</table>

The above table indicates baseline and predicted annual targets for SMART patrolling reports for each PA, including an initial rise as patrolling and enforcement efforts are stepped up before declining.
See Annex 9 for baseline analysis of SMART patrolling reports. This records the rate of individuals stopped per year for illegal activities for every 100km patrolled in each PA

</td></tr>
<tr><td>2.2.Stable or increased encounter rates for key species in each demonstration PA based on annual summaries of SMART patrolling data and focused auditory surveys for gibbons.</td><td>

Target of encounter rate of 2 Hoolock Gibbon groups/ km^2 and 2.5 ungulate sign observations/ 100 km patrolled for all four demonstration sites Annual analyses of SMART monthly patrolling reports and focused auditory surveys for each PA. Monitoring protocols for these indicators will be finalized during the project inception period, and baselines completed where missing during Year 1.

</td></tr>
<tr><td>2.3.Improved management effectiveness of individual PAs covering 2,604,000 ha, indicated by the % increase in the METT assessment (see Annex 3)</td><td>

See the GEF PA Management Effectiveness Tracking Tool in Annex 3, which is self-explanatory. This indicator aims to record the project's success in improving the management effectiveness of four demonstration protected areas through METT assessments carried out at PPG (baseline), project midterm and project completion. Baselines and targets are as follows:

<table>
<tr><th>Protected Area</th><th>METT Baseline Score</th><th>METT Target Score</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary (1,737,300 ha)</td><td>52%</td><td>82%</td></tr>
<tr><td>Hkakaborazi National Park (381,200 ha)</td><td>51%</td><td>83%</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary (270,400 ha)</td><td>12%</td><td>69%</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary (215,100)</td><td>49%</td><td>82%</td></tr>
</table>
</td></tr>
<tr><td>2.4.Pilot community participation measures</td><td>

Community participation systems piloted at demonstration PAs and incorporated into management plans, as evident from project reports evaluating these pilot activities; and revised site management plans incorporating appropriate community participation mechanisms and activities.

</td></tr>
</table>

INDICATOR	EXPLANATORY NOTE
implemented at demonstration PAs	

RISKS AND ASSUMPTIONS

169. The project strategy, described in detail within this project document, makes the following key assumptions in proposing the GEF intervention:

- Baseline conditions in the selected demonstration protected areas can be extrapolated with high confidence level to other protected areas in Myanmar and lessons learnt can be successfully disseminated.

- Increased awareness and capacity will lead to a change in behaviour with respect to the integration of biodiversity conservation concerns into land use policies and practices, especially within and adjacent to protected areas.

- Sustainable financing and effective protected area management will gradually become a national priority for Myanmar as knowledge and information is made available.

170. During project preparation, risks were updated from what has been presented at the PIF stage, elaborated and classified according to UNDP/GEF Risk Standard Categories[71,] and assessed according to criteria of 'impact' and 'likelihood' (see **Box 1 and Table 5** below). These risks and the mitigation measures will be continuously monitored and updated throughout the project, and will be logged in ATLAS and reported in the PIRs. The UNDP Environmental and Social Screening Procedure (see **Annex 11**) has been applied during project preparation and did not identify any significant environmental or social risks associated with the proposed project. In general, the project will contribute positively towards the conservation and sustainable use of biodiversity in Myanmar's PA system, as well as towards a strengthened policy and regulatory framework for the involvement of indigenous and local communities in community-based natural resource management, co-management of protected areas and improved land use sustainability.

171. During the PPG phase, projects risks were updated from what has been presented at the PIF stage. They were further elaborated and classified according to UNDP/GEF Risk Standard Categories[72], and assessed according to criteria of 'impact' and 'likelihood' (**Box 1**):

[71]Includes the following eight categories: environmental; financial; operational; organizational; political; regulatory; strategic; and other.
[72] Includes the following eight categories: environmental; financial; operational; organizational; political; regulatory; strategic; and other.

Box 1. Risk Assessment Guiding Matrix						
	Impact					
Likelihood		CRITICAL	HIGH	MEDIUM	LOW	NEGLIGIBLE
	CERTAIN / IMMINENT	Critical	Critical	High	Medium	Low
	VERY LIKELY	Critical	High	High	Medium	Low
	LIKELY	High	High	Medium	Low	Negligible
	MODERATELY LIKELY	Medium	Medium	Low	Low	Negligible
	UNLIKELY	Low	Low	Negligible	Negligible	Considered to pose no determinable risk

Table 5.Project Risks Elaboration, Assessment and Mitigation Measures

Identified Risks	Category	Impact	Likelihood	Risk Assessment	Elaboration of Risks	Mitigation Measures
Exploitation fuelled by the existence of significant trade in wildlife and forest products to China may decimate ecosystems and wildlife populations	STRATEGIC	HIGH	MODERATELY LIKELY	MEDIUM	Sharing long and porous borders with China, India, Thailand, Laos and Bangladesh, and with rich wildlife resources, Myanmar is subject to significant wildlife trade, especially for Chinese markets. See threats section for details.	Given the relatively significant level of this risk, one of the pillars of the Project design is to increase the MOECAF's capacity for law enforcement in Myanmar, to fully implement relevant PA and biodiversity laws. It will also strengthen the country capacity for effective participation in regional and global networks to protect wildlife at its source (e.g. CITES-MIKE, ASEAN-WEN).
Political tension between ethnic minority groups and the central government may limit ability to implement project activities effectively.	POLITICAL	MEDIUM	MODERATELY LIKELY	LOW	The access to Hukaung Valley WS has been partly limited by political tension between ethnic minority groups and the central government.	The project will develop relationships with local ethnic leaders to increase awareness, build trust and encourage participation in project activities to ensure that tension is limited. The project is designed so that project outputs and outcomes can be achieved even if the security situation in the Hukaung area seriously deteriorated, by including three relatively secure PAs - Hkakaborazi NP, Hponkanrazi WS, Htamanthi WS. In case of the security issue, the project could also support alternative PAs within the upper tiger conservation landscape such as Natmataung NP and Rakhine Yoma Elephant Range.
Relevant Government agencies may be reluctant to promote conservation-oriented land-use for a fear of losing other development revenues from overwhelmingly large business and investment interests by offshore companies	STRATEGIC	HIGH	MODERATELY LIKELY	MEDIUM	As Myanmar opens up to foreign companies, its rich natural resources will come under increasing pressure from offshore mining, plantation, energy, and industrial companies. Both national and regional governments will need to balance economic development with sustainable land use and biodiversity conservation. See threats section for details.	Working closely with the Ministry of National Planning and Economic Development and the Ministry of Finance, the project aims to influence the national development and fiscal development planning process, through mainstreaming biodiversity and PA system objectives. Participatory land use planning at state, region and local levels through this project will serve as a platform to develop development plans that integrate conservation priorities. It will also be critical to capture the potential of ecosystem markets in support of the PA system management.
Climate change may undermine the conservation objectives of the project	ENVIRONMENTAL	MEDIUM	UNLIKELY	LOW	Climate change is forecast to result in increased temperatures, increased rainfall, increased frequency of storms and droughts, and sea level rise affecting the PA System. Such changes may impact the PA system through, for example, increased incidence of fire during droughts, as well as direct impacts of temperature changes on sensitive species.	The project will work to address the anticipated negative impacts of climate change by increasing resilience through improving PA management and landscape linkages and the expansion and rationalisation of the PA system. Through this, the project will contribute to the maintenance of ecosystem resilience under differing climate change conditions, so as to secure a continued sustainable flow of ecosystem services.

INCREMENTAL REASONING AND EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

172. **The incremental approach can be summarised as follows**: The Government of Myanmar has clearly identified biodiversity conservation as a priority and has contributed what limited resources it has to protecting a portion of the rich biodiversity it possesses. However, despite strong commitments from the government, actions are seldom taken to concretely remove the barriers to the establishment of a sustainable PA system. In addition, in many existing PAs, pressure for land and biological resources requires urgent action in order to prevent further degradation of critical ecosystems and loss of endangered species. The proposed intervention is particularly timely given that with the recent political changes and rapid economic boom the country is experiencing there is now a greater need than ever to strengthen the PA network, by securing critical biodiversity hotspots within the PA system and establishing the foundationsand financial resources for effective management at the site and landscape level.

173. **In the baseline situation,**without GEF investment in the proposed project, a lack of capacity and resources, insufficient political support and an inability to expand management systems will mean that threats to the PAs and their associated biodiversity and ecosystem services will continue to grow. Amidst the frenzy of fast economic development, substantial amounts of important biodiversity will be lost and degraded in coming decades. Although there are some long-established PAs in Myanmar, there has been no systematic approach to protected area management. The PA network is only now being established, and lacks appropriate institutional structures, management capacity and particularly sources of long-term financing. National government investment in PAs has historically been very low, and current allocations are insufficient to support even routine operational costs such as patrolling or community outreach. This falls far short of the amounts needed to ensure even basic management. Against this backdrop, there have been some positive and systematic approaches towards strengthening the management and protection of natural resources, notably through implementation of the Forest Master Plan (2001), which aims to expand the PA network to 10% of land area. A national REDD+ readiness road map and programme are under development, a National Tiger Recovery Plan has been developed, and both international donor programmes and INGOs continue to contribute positively towards biodiversity conservation in Myanmar. However, these measures are completely inadequate to provide the systemic improvements needed to address the intense and increasing scale of threats impacting biodiversity in Myanmar.

174. **In the alternative scenario enabled by the GEF**, systemic and institutional barriers to improved PA management and sustainable financing in Myanmar will be removed at the national, regional and site levels. The first stage of the PA expansion will be achieved with PAs expanded to at least 10% of the national terrestrial area, with more complete representation of the globally significant ecosystems within the country. Financing for the PA system will be improved using economic tools and by increasing government investment as well as establishing new revenue streams. A number of key policy and legislative issues will be reviewed, consulted on and recommendations made to remove constraints to development of the PA system. Capacity of the Forest Department will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, SMART patrolling and law enforcement monitoring system. On the ground, PA management will be significantly improved at the four demonstration PAs located in two high priority conservation corridors, including capacity building, piloting the introduction of community participation systems, reducing external threats from over-exploitation and trade in wildlife and forest products, and strengthened monitoring systems linked to adaptive site management. The lessons learned from these PAs will be used to increase capacity nationwide by drawing on successful practices and mainstreaming them into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centres (CFDTC) to systematically train Forest Department staff. Opportunities at the site level will determine pilots to sustainably finance their operations, integrated into site business plans. These ground level activities will be used to raise the awareness of relevant decision makers concerning the PA network and ensure that all PAs in the country are integrated into national level land-use planning.

175. **Global Environmental Benefits:** The immediate global benefits are improved management of an expanded terrestrial PA network in Myanmar covering 10% (6,765,530 ha) of the country's land-area, in the largest and most heavily forested country in South-East Asia with 14 WWF Global Ecoregions within the territory. Myanmar and its national PA network support globally significant populations of a number of species of conservation concern, including Tiger, Asian Elephant, and primates, as well as over 80% of the birds found in South-East Asia and some of the most highly diverse plant communities in the world. In addition, reduction of threats and improved habitat conditions will directly result from improved management effectiveness at the four demonstration PAs in Component 2, covering a combined area of 2,604,000 ha and benefiting a wide range of ecosystems and globally threatened species (see summary information in **Table 2** and PA profiles in **Annex 6**).

176. **Socio-economic Benefits:**Strengthening the PA system in Myanmar will have significant socio-economic benefits at both national and local levels. Nationally, it means safeguarding the highly unique natural heritage for the benefit of current and future generations and ensuring continued supply of ecosystem services for the people of Myanmar. It will also help prevent the enormous cost, both in terms of asset loss and human lives, of natural disasters including floods and landslides.

177. Only one environmental valuation study has been completed to date (Emerton and Yin Ming Aung, 2013)[73], which estimated that the value of Myanmar's overall forest ecosystem services is over $7 billion USD. Of this, income earned from forest utilisation accounts for less than 15% of the value estimated in this study. By far the largest share – 85%, or around $6 billion USD − comes from forest ecosystem services such as forest carbon sequestration, watershed protection services, insect pollination, tourism, and mangrove protection of coastlines and fish nurseries. Investment in forest conservation is therefore expected to deliver significant net returns, estimated at around $39 billion USD over the next twenty years, or a net present value of $10 billion USD. The GEF investment will contribute to these national economic benefits by strengthening the management effectiveness of the PA system.

178. Effective management of Myanmar's PA network and expansion of the network from the current 5.6% to 10% of the country's land area (the government target) – to which this project will contribute signficantly - would safeguard around 20% of Myanmar's forests. No assessments of the forest carbon value of the PA network are available, but Emerton and Yan Ming Aung (2013) estimate the value of forest carbon sequestration in Myanmar from forests and mangroves at $890 million USD. Protection of the forest carbon in Myanmar's PA network would therefore make a very significant contribution to efforts to reduce emissions from deforestation and forest degradation. The Union Government has developed a Myanmar REDD+ Roadmap (led by MOECAF), which is expected to be financed by the Government of Norway through the UN-REDD programme. The Roadmap already identifies expanding the PA network to 10% of the country's land area and enhancing the management of PAs as necessary REDD+ strategies.

179. Forest watershed protection is key to ensure a sustainable hydropower sector. Current installed capacity in Myanmar is around 2,500 MW (WEF 2013), generating around 8.6 billion kWh and distributing around 6 billion kWh (MNPED 2012) – about three quarters of total electricity generation capacity in the country. The Ministry of Electric Power estimates the country's hydropower potential to be more than 100,000 MW, and has identified almost a hundred potential sites for development, with an estimated capacity of just under 50,000 MW (ADB 2012). Almost all of these planned or existing schemes lie within, or immediately downstream of, forested areas, but there has been no assessment of the overlay with the PA network. Emerton and Yan Ming Aung (2013) estimate the value of watershed protection services to the hydropower industry in Myanmar at $721 million USD.At the demonstration sites under this project, plans for a cascading system of hydropower projects on the M'Hka River downstream of Hkakaborazi NP, presentsan opportunity for developing PES/PWS as sources of sustainable financing for watershed protection and as a means of linking ecosystem services and PA management into developing planning at regional and national levels.

180. Under current law there is no legal basis for communities to directly benefit commercially from resources inside PAs that are found on their traditionally occupied lands. Consequently, through the Forest Department, the project will review national policy and legislation in order to enable communities to have a greater role in the management of natural forests and a clear mechanism to share in the economic benefits derived from the sustainable harvest of forest products, timber and, potentially, carbon and tourism revenues. At the demonstration sites, the project can pilot options through which local people could benefit financially from the management of areas allocated to them (eg ecotourism and use of NTFP).

181. Locally, the project will bring in socio-economic benefits to approximately 50,000 people in and around the four PAs. Communities will continue to be able to benefit from access to an improved forest resource base, including NTFP and tourism resources (see the PA profiles in **Annex 6** for baseline information on current land uses). Safeguards will be put in place for continued access, through full participation of community members in the PA management operation, with legally agreed sustainable use regimes and monitoring mechanisms. In order to ensure socio-economic benefits and their sustainability, local level activities will be carried out with the participation of local stakeholders, with full consideration given to gender dimensions. Local stakeholders themselves will implement many local level activities. There are already a number of successful livelihood support activities in place in some PAs, which have been supported by

[73]Emerton, L. and Yan Ming Aung. (2013) The Economic Value of Forest Ecosystem Services in Myanmar and Options for Sustainable Financing. International Management Group, Yangon.

NWCD and WCS. These include community nurseries for important forest products and cash crops to support local livelihoods, and the recruitment of community conservation volunteers in focal communities to aid in law enforcement and monitoring activities.

182. Through the effective protection of key landscapes, globally significant ecosystems and biodiversity, coupled with its increasing accessibility to international tourists, Myanmar's attraction as an ecotourism destination will continue to increase, with real potential for substantially increasing tourism revenue and employment creation in and around its protected areas. At Hponkanrazi WS and other demonstration sites, the combination of dramatic scenery, including high mountains, forest and clearwater river systems and rich biodiversity offer ecotourism development opportunities, with the potential to benefit local communities.

183. During the baseline assessment of the demonstration sites during project preparation, women and girls were recognized as key natural resource users and managers, particularly for collection of water and fuel wood and farming. They were identified as key stakeholders who engaged in and benefited from capacity building and improved natural resources management. Women were heavily involved in income-generating activities, and played a critical role in sustaining communities afflicted by opium addiction. Following UN and GEF gender policies and strategies (see the ESSP in **Annex 11)**, special attention will be placed on gender equity, and in particular to ensure full participation of women in consultations on integrated natural resource management and land-use planning processes in the demonstration PAs. Similar attention will also be placed on equity regarding ethnicity in all relevant project processes, given the diversity of ethnic groups resident in the demonstration PAs (see the PA profiles in **Annex 6**). Specific measures will be employed in the community participation activities, including at least 30% of community facilitators will be women, and at least 50% of CBO members, and development of activities will include contact with women's groups. National consultant inputs have been included to integrate and monitor gender and ethnic minority interests into project implementation.

COST-EFFECTIVENESS

184. The project's approach of addressing PA system level barriers (including weak systematic and institutional capacity to plan and manage the expanded PA system, and insufficient management capacity and motivation at PA level to manage local threats and achieve conservation outcomes) is cost-effective in that it will have broad applicability at provincial and national levels, including impacts beyond the selected demonstration sites. As such, the project contributes directly towards larger national policy, regulatory, fiscal, data management and communications goals in support of biodiversity conservation and an effectively managed national PA system.

185. The project will specifically aim to strengthen the sustainable financing of Myanmar's PA system. It will support the development and operationalization of the national PA system financing strategy, which will account for existing and future needs for enhanced management effectiveness and system expansion. It is intended that this plan will be integrated into the national development plan including national budget allocation. In addition, the project will investigate a range of alternative financing options in order to diversify income sources (including public-private partnerships, dedicated PA tourism fees, Payments for Environmental Services (PES), Biodiversity and Forest offset mechanisms, and Forest carbon – Reducing Emissions from Deforestation and forest Degradation (REDD+)), and seek to remove barriers for their use in PA management.

186. At a technical level, the streamlining of progressive approaches throughout Myanmar's PA system for law enforcement, monitoring and information management will be a cost-effective investment in terms of project impact as well as MOECAF's operations in the long term. The project's approaches in building support from across multiple sectors, stakeholders including local communities, and building capacity of the MOECAF and key regional Forest Departments are expected to lead to cost-effective PA management that avoids duplication of work, reduces biodiversity degradation and loss of ecosystem services from incompatible development practices, and ensures the sharing of timely information and resources.

187. The total GEF investment of US$6,027,397 for this project will leverage a minimum of US$17.9 million in cofinancing, a ratio of 2.97, with additional associated financing inputs anticipated during project implementation. The overall GEF investment in strengthening management effectiveness for Myanmar's existing terrestrial PA system (3,788,697 ha) will average around US$ 1.6 per hectare per year, a small fraction of the estimated value of the ecosystem services provided. Only one environmental valuation study has been completed to date

(Emerton and Yin Ming Aung, 2013[74]), focusing on Myanmar's overall forest ecosystem services rather than just the PA network. This estimated that the value of Myanmar's forest ecosystem services is over US$7 billion, of which some 85%, or around US$6 billion − comes from forest ecosystem services that maintain the productivity of other sectors, add value to their output, and help them to avoid costs, losses and damages. This includes, for example, forest carbon sequestration, watershed protection services, insect pollination, tourism, and mangrove protection of coastlines and fish nurseries. Investment in forest conservation is therefore expected to deliver significant net returns, estimated at around US$39 billion over the next twenty years, or a net present value of US$10 billion.

188. Finally, the recognition associated with involvement in an international project and receipt of GEF resources channeled through a UN implementing agency is a source of pride for national, regional and local project partners in Myanmar, which often facilitates the necessary political commitment to take difficult decisions on issues such as expanding the PA network, upgrading PA protection status, inter-agency coordination to reduce external pressures on PAs, the adoption of more environmentally friendly practices in related sectors, and concessions on land uses; a particularly cost-efficient contribution to biodiversity conservation in Myanmar.

PROJECT CONSISTENCY WITH NATIONAL PRIORITIES/PLANS:

189. The project will directly support the 2012 *Myanmar National Biodiversity Strategy and Action Plan* (NBSAP), directly contributing towards implementation of three Strategic Directions in the NBSAP.

- *Direction 1: Strengthen conservation of Priority Sites* including four priorities for intervention: Intervention 1.1 Review and support the expansion of the national protected area system to address gaps in coverage of globally threatened species and Key Biodiversity Areas; Intervention 1.2 Strengthen protected area management at Priority Sites; Intervention 1.3 Pilot alternative approaches to formal protected area management at Priority Sites; and Intervention 1.4 Support strengthening of the legal framework for protected area management and species conservation.
- *Direction 2: Mainstream biodiversity into other policy sectors* including three priorities for intervention: Intervention 2.1 Integrate biodiversity into decision-making processes for land-use and development interventions in the Priority Corridors, Intervention 2.4 Forge partnerships between biodiversity conservation and rural development initiatives, maximize synergies and mitigate risks; and Intervention 2.5. Cooperate with other concerned departments to raise awareness of the trade-off between biodiversity conservation and sustainable development; and
- *Direction 4: Support local NGOs and academic institutions to engage in biodiversity conservation* including Intervention 4.3 Support the development of conservation curricula at local academic institutions.

190. In addition the project will support activities in two five-year action plans from the MNBSAP. In the *Five-year Action Plan toward sustainable nature conservation and wildlife management* the project will conduct activities that support the following actions in whole or in part:

- the increase to 10 percent of the total area of the country gazetted as PAs by addressing gaps in coverage of globally threatened species and Key Biodiversity Areas and ensuring that all notified protected areas are well managed and looked after (In-situ Conservation).
- Notify the proposed 7 protected areas as soon as possible.
- Establish wardens' offices at remaining notified protected areas.
- Conduct status surveys of priority species, studying their distribution and link results to conservation management.
- Strengthen conservation and management of biological diversity and promote sustainable use of biological resources in line with the CBD and national policies.
- Promote local communities participation in biodiversity conservation.
- Support the development of conservation curricula in basic education.
- Commission a systematic study for improving the legal system for effective environmental management and biodiversity conservation.

[74] Emerton, L. and Yan Ming Aung. (2013) The Economic Value of Forest Ecosystem Services in Myanmar and Options for Sustainable Financing. International Management Group, Yangon.

191. In the *Five-year Action Plan toward sustainable management of land resources* the project will conduct activities that support the following actions in whole or in part:

- Adopt a well-defined or clear-cut land use policy aiming at sustainable development and ensuring environmental sustainability.
- Formulate an integrated land use plan that takes into consideration national priorities and goals based on scientifically categorized different land uses.
- Review to strengthen policies concerning land resources management and to avoid conflicts due to jurisdictional overlapping.

192. In addition, the high priority conservation corridor identified for the project overlaps with Myanmar's Tiger Conservation Landscapes (TCL). Project activities will also address all components of the *Myanmar National Tiger Recovery Plan* as submitted to the Global Tiger Initiative in June 2010. These activities include:

- Landscapes with appropriate extensions and corridors legally protected;
- Improved management especially concerning law enforcement in source landscapes;
- Monitoring ongoing in source landscapes; and
- Improved national and trans-boundary cooperation

193. The project will contribute directly towards the achievements of targets for the terrestrial PA system in the The Forest Policy (1995) and30-year Forest Master Plan (2001), which mandated the increase of the Permanent Forest Estate (constituted by reserved forests and public protected forests) to 30% and of PAs to 10% of the total country area as the first stage of the PA expansion. The expansion of the Myanmar PA network to 10% of the land area (the Government target), and the effective management of these PAs, has also been identified by the Myanmar REDD+ Roadmap as initial strategies that should be undertaken as part of REDD+ implementation. The GEF project will, therefore, work closely with the Myanmar REDD+ Working Group and the UN-REDD Programme during the REDD+ Readiness phase to identify synergies and integrate PAs into the candidate REDD+ strategies. The project will also review REDD+ as a potential mechanism for contributing towards the financial sustainability of the PA system.

194. The Project will also contribute by strengthening conditions for the recent (March 2014) tentative list of applications for World Heritage Convention Natural Sites, including: Hukaung Valley Wildlife Sanctuary, the Northern Mountain Forest Complex (consisting of Hkakaborazi National Park (NP) and Hponkanrazi Wildlife Sanctuary (WS), along with a potentialSouthern Extension of Hkakaborazi NP), the Ayeyarwady River Corridor, Indawgyi Lake Wildlife Sanctuary, Myeik Archipelago, Natma Taung National Park, and the Tanintharyi Forest Corridor (including the proposed Tanintharyi and Lenya National Parks). Inle Lake is also listed, as a mixed natural/cultural heritage application.

195. It will also support implementation of the the Myanmar National Environmental Policy and Environmental Conservation Law (2012), which provide basic principles and give guidance for systematic integration of environmental conservation matters in the sustainable development process; conserve natural and cultural heritage;restore ecosystems in the early stages of degradation;prevent degradation of natural resources, enable sustainable use; and other measures such as ESIA (for which provisions should be made regarding the sensitivity of protected areas and biodiversity).

196. Myanmar's National Adaptation Programme of Action (NAPA) to Climate Change was published in 2012. It specifies 32 priority activities (Priority Adaptation Projects) for effective climate change adaptation for eight main sectors/themes, namely: i) Agriculture; ii) Early Warning Systems; iii) Forest; iv) Public Health; v) Water Resources; vi) Coastal Zone; vii) Energy, and Industry; and viii) Biodiversity. Priority activities for Forest include: 1) Building the resilience of degraded/sensitive forest areas to climate change impacts through reforestation; 2) Community-based reforestation for climate-resilient ecosystems and rural livelihoods in degraded watershed areas of the Central Dry Zone; 3) Community-based mangrove restoration for climate-resilient ecosystems and rural livelihoods in vulnerable and degraded coastal regions; and 4) Enhancing the climate change resilience of rural livelihoods through community-based restoration at the Indawgyi and Inle Lake watershed areas in the Northern Hilly Region. Priorities for Biodiversity include: 1) Mainstreaming ecosystem-based climate change adaptation for buffering rural communities against climate change impacts into policy, planning and relevant projects; 2) Buffering marine habitats and sustaining fish populations under climate change conditions through community-based MPA management and ecosystem sensitive fishery practices in three areas.

197. As the 2014 Chair of ASEAN, Myanmar is in a strong position to strengthen regional cooperation and demonstrate progress in various fields, including environmental sustainability. Myanmar participates in ASEAN environmental initiatives including the meetings of ASEAN environment ministers, and the ASEAN Wildlife Enforcement Network (ASEAN-WEN). The project will contribute towards the latter in particular through policy improvements, capacity building, and developing a regional Law Enforcement Action Plan for Kachin State. Hkakaborazi NP project site is also an ASEAN Heritage Site.

198. Finally, the Nay Pyi Taw Accord for Effective Development Cooperation (2013) has been developed in collaboration between the Government and development partners in a spirit of mutual benefits and accountability. The Government of the Republic of the Union of Myanmar intends to move progressively in the coming years to promote broader development effectiveness, starting with this agreement on effective development cooperation. Through this accord, the Government commits to a number of actions, many of which are relevant to biodiversity conservation within protected areas, including to engage strongly with civil society in participatory approaches, including providing greater voice to women, minorities and marginalised people; strengthen social and environmental safeguards and compliance with their implementation; and development partners commit to ensure adequate social and environmental impact assessments are undertaken and ensure compliance with the results in designing and delivering development activities. The present project will contribute towards this Accord at national, regional and local levels.

COUNTRY OWNERSHIP: COUNTRY ELIGIBILITY AND COUNTRY DRIVENNESS

199. The Government of Myanmar's commitment to biodiversity conservation is evident in its signature to the Convention on Biological Diversity (CBD) in 1992, ratified in 1994, as well as its participation in other MEAs including the Ramsar Convention (2005) , CITES (1997), WHC (1994), UNCCD (1997) and UNFCCC (1992). In 2011, Myanmar became a UN-REDD Programme partner country and has developed a Myanmar REDD+ Roadmap (led by MOECAF), which identifies expanding the PA network to 10% of the country's land area and enhancing the management of PAs as necessary REDD+ strategies. Myanmar has been steadfast in its commitments under CBD including implementation of Article 8 (*In situ conservation*), having established a network of 43 PAs, 36 of which been officially gazetted, while 7 are in the process of approval and currently remain proposed. The 36 PAs cover 5.6% of the total land area of the country, and the addition of the 7 proposed protected areas will increase this to 6.7%.

200. The project will contribute to the implementation of the Programme of Work on Protected Areas (PoWPA) as submitted to the CBD secretariat in January 2012, and towards achievement of the Aichi Targets, in particular under the strategic goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity, Target 11 through increasing significantly the coverage and connectivity of the PA system in important regions with high biodiversity importance and significant ecosystem services, and by increasing management effectiveness of the PA system in a way that is integrated into the wider landscapes.

201. The project is consistent with Myanmar's National Biodiversity Strategy and Action Plan (MNBSAP, 2012), directly supporting implementation of three Strategic Directions in the MNBSAP: *#1: Strengthen conservation of Priority Sites, # 2: Mainstream biodiversity into other policy, and #4: Support local NGOs and academic institutions to engage in biodiversity conservation*. Myanmar is a partner of the Global Tiger Initiative and was represented at the Global Tiger Summit in St Petersburg in September 2010 by the then Minister of Forestry. It submitted a National Tiger Recovery Plan (NTRP), as part of the Global Tiger Recovery Plan in June 2010. These all add up to a clear commitment on behalf of the government to ensure adequate protection and restoration of the natural environment of the country to protect biodiversity, maintain vital ecosystem functions and help regulate climate.

202. As host of the national GEF Operational Focal Point, national CBD focal point and national executing agency for this project, the MOECAF has both strong ownership and an over-riding interest in its success. The project will directly contribute towards the further development and sustainable financing of the national protected areas system, which is under the direct mandate of the Nature and Wildlife Conservation Division (NWCD) of the Forest Department. The MOECAF and its related bodies have been involved in both the development of the PIF and this project document and have committed substantial co-financing (USD 4.6 million) to enable implementation of the full sized project.

SUSTAINABILITY AND REPLICABILITY

203. **The Environmental and Social Screening Procedure (ESSP)** was followed during project preparation, as required by the ESSP Guidance Note of the UNDP. Accordingly, the environmental and social sustainability of project activities will be in compliance with the Environmental and Social Screening Procedure for the project (see **Annex 11**). The ESSP identified no significant issues for this project that would result in negative environmental and social impacts. Overall, the project is expected to result in major long term positive impacts for biodiversity conservation and local and indigenous communities in Myanmar.

204. *Environmental sustainability*: will be achieved first through an expanded and improved PA system design in terms of area coverage, ecosystem representation and connectivity. Key considerations include increasing the resilience of the PA system in the face of climate change, anticipated future developments and environmental change, reinforcing watershed protection for Myanmar's key river and wetland systems, and ensuring sustained provision of ecosystem services from the nation's forest and wetland resources. Secondly, improved management effectiveness for the PA system as a whole, and for the selected demonstration PAs as a result of the project's emphasis on capacity building, will strengthen the environmental sustainability of the PA system through more effective threat reduction.

205. *Financial sustainability*: will be achieved through the project's significant inputs on strengthening sustainable financing for Myanmar's terrestrial PA system, including the development and operationalization of the national PA system financing strategy, which will account for existing and future needs for enhanced management effectiveness and system expansion. It is intended that this strategy will be integrated into the national development plan including national budget allocation. In addition, the project will investigate a range of alternative financing options in order to diversify income sources (including public-private partnerships, dedicated PA tourism fees, PES, biodiversity and forest offset mechanisms, and forest carbon – REDD+), and seek to remove barriers for their use in PA management.

206. In addition, the project has been be designed to ensure that the major costs involved in setting up new systems and technologies are covered during the project period, with any necessary long-term maintenance costs related to project initiatives remaining affordable. Most project components will be completed within the project period, including capacity building, financial planning, recommendations for improvement of policies, regulations, etc, demonstration activities at the selected sites including site management and monitoring plans, enhanced law enforcement monitoring, biodiversity monitoring systems, community participation and development programmes, and education and awareness programmes. At the demonstration site level, it is recognised that sufficient financial sustainability must be established to cover long term management costs, especially patrolling and monitoring, and opportunities associated with the individual PAs will be pursued,such as tourism development and PES/PWS linked to hydropower development plans.

207. *Social sustainability*: will be improved through efforts to support and empower local communities for greater involvement in PA management activities, especially through demonstration co-management arrangements, sustainable livelihood development and awareness raising to address existing local resource use conflicts and empower women. Long-term investments to raise staff and institutional capacities for stakeholder participation, and sustained improvements in relations with local communities (through regular communication, joint field operations and targeted awareness raising) will lead to increased levels of local participation and improved PA governance, contributing to the overall sustainability of project outcomes.

208. *Institutional sustainability*: the project specifically focuses on building staff and institutional capacity for enhanced planning and management effectiveness for the PA system at national, subnational and local levels, ensuring strong project ownership. Through capacity building at the demonstration sites in Component 2, the project will ensure that sound management structures are in place for long term activities. Site management staff will be members of the appropriate authority (under MOECAF) and the project will not create new (non-government) management structures. The project will support the hiring, training and on-the-job experience for new PA staff, which will prepare them for entry into professional service with the Forest Department, as has occurred for baseline conservation work supported by WCS. Similarly, the capacity of NWCD staff in the PCU for international project management will be developed, building readiness for NIM in future projects.

209. In addition, the project aims to strengthen cross-sectoral coordination amongst relevant government agencies at national and subnational levels. Key project outcomes will be endorsed by the appropriate government authorities. Consultation and participatory

processes will be promoted to generate trust and respect for the voices of various national and subnational stakeholders, aiming to generate a better understanding of conservation priorities and better cooperation with relevant government agencies. The project's management arrangements will ensure that all institutional levels are involved in project coordination and working closely together. Institutional sustainability is also underpinned by the fact that baseline activities during project preparation have already included extensive consultation with stakeholders at all levels, including local communities at the demonstration sites (see **Annex 7**) as well as a wide range of sectors, and that the project will support a continued inclusive and consultative approach supported by awareness raising measures in order to systematically strengthen recognition of the PA system.

210. The sustainability of necessary project activities and benefits beyond the completion of the GEF project will also be ensured as a result of their conformity with Government of Myanmar legislation and policy development, specifically the NBSAP (2012), the *Five-Year Action Plan toward sustainable nature conservation and wildlife management*, and the *Five-Year Action Plan toward sustainable management of land resources*, including integrating the project's work at subnational level into subnational development plans with due regard for regional government priorities.

211. At a technical level, the CSO implementing partner WCS has significant experience in supporting PA management, capacity building, law enforcement monitoring and biodiversity assessment and monitoring in Myanmar over 20 years, including presence at three of the four selected demonstration sites. The approaches and techniques to be institutionalized through this project have been tested in Myanmar and applied successfully in other countries in the region (e.g. Cambodia), and with the time and resources available through this GEF project, are intended to reach a point of operational sustainability by the end of the project.

212. *Replicability*: the project's outcomes are replicable as the barriers it addresses are largely shared across Myanmar's PA system and to a fair extent in neighbouring countries in SE Asia, and the approaches used are transferable to strengthen the management effectiveness of PA systems in the region (as already demonstrated by WCS to varying degrees).

213. The project's outcomes will also contribute towards larger national policy, regulatory, fiscal, data management and communications goals in support of biodiversity conservation. This will include informing national policy development on issues such as strengthening inter-sectoral coordination with regard to the PA system and biodiversity conservation, valuation of ecosystem services, mechanisms to support PA management costs, monitoring ecosystem health, and community-co-management approaches.

214. Several activities for capturing best practices and local traditional knowledge will be used in the project to help promote replicability, including UNDP's Learning and Knowledge Sharing electronic platform. The outcomes of the project will be made available for replication through the dissemination of project results, lessons learned and experiences including the documentation of best practices in PA management. The lessons learnt from pilot management activities at the demonstration PAs will be used to increase capacity nationwide by drawing on successful practices and mainstreaming them into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centre (CFDTC) to train future Forest Department staff. Best practices drawn from these pilot management activities will be thus be incorporated into central level learning networks and gradually expanded to PAs nationwide and sustained.

PART III: Management Arrangements

IMPLEMENTATION ARRANGEMENTS

215. The project will be implemented under the CSO Implementation modality. The Wildlife Conservation Society (WCS) will bethe implementing partner for the project, based on the Standard Project Cooperation Agreement to be signed between the UNDP and WCS. WCS will appoint a Project Manager who will be responsible and accountable for the implementation of the project.

A Project Coordination Unit (PCU) will be established within the MOECAF Headquarters in Nay Pyi Taw headed by the Project Manager and staffed by MOECAF personnel, WCS personnel and other project hired personnel as appropriate.

The MOECAF is the lead government coordinating agency, which is the government institution responsible for the coordination of the project activities. A Director of the Forest Department will act as the National Project Director (NPD), who is the MOECAF focal point for the project. The NPD will be responsible for providing government facilitation and guidance for project implementation. The NPD will not be paid from the project funds, but will represent a Government in-kind contribution to the Project.
The Director General of the Forest Department and UNDP will co-chair the Project Board (PB), which will be convened at least twice a year. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP. UNDP is the sole GEF Implementing Agency for the project, providing the project assurance and cycle management services.

Project Oversight

216. Oversight of project inputs and outputs will be the responsibility of the PB. As Implementing Partner of the project, WCS will be responsible for the project implementation, and the timely and verifiable attainment of project objectives and outcomes. Day-to-day operational oversight for project procurement and implementation of activities, and quarterly and annual reporting (substantive and financial) will be ensured by WCS. This oversight will include ensuring that the project practices the UNDP policies and procedures as set out in the UNDP Programme and Operation Policies and Procedures (POPP) and due diligence with regard to UNDP's Social and Environmental Quality Standards. The structure of project management and oversight arrangements is shown in the organogram below.

217. UNDP as the GEF implementing agency holds overall accountability and responsibility for the delivery of results to the GEF. Working closely with WCS and MOECAF, the *UNDP Country Office (UNDP-CO)* will have the project assurance role and will : 1) provide financial and audit services to the project including budget release and budget revision, 2) oversee financial expenditures against project budgets, 3) ensure that all activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures, 4) procure project vehicles as per request from WCS/MOECAF, 5) ensure that the reporting to GEF is undertaken in line with the GEF requirements and procedures, 6) ensure project objectives achievement and timeliness, 7) facilitate project learning, exchange and outreach within the GEF family, 8) contract the project mid-term and final evaluations and 9) trigger additional reviews and/or evaluations as necessary and in consultation with the project counterparts. The UNDP Country Director or his designated officials will be represented on the PB.

Project Board

Membership

218. The Project Board (PB) (also known as the Project Steering Committee) will be jointly convened by UNDP and MOECAF.

219. The PB will be co-chaired by the Director General of the Forest Department and UNDP, and include the following stakeholders: Ministry of National Planning and Economic Development, Ministry of Finance, Kachin State and Sagaing Division Governments (General Administration Departments / Forest Departments), and Wildlife Conservation Society. Other organizations may be added as necessary and agreed by PB. PCU will serve as secretary for the PB.

Functions

220. The PB will serve as the project's decision-making body. It will meet according to necessity, but not less than twice each year, to review project progress, approve project work plans and approve major project deliverables. The PB is responsible for providing the strategic guidance and oversight to project implementation to ensure that it meets the requirements of the approved Project Document and achieves the stated outcomes.

221. The PB's role will include: (i) providing strategic guidance to project implementation; (ii) assuring coordination between various donor funded and government funded projects and programmes; (iii) ensuring coordination with various government agencies and their participation in project activities; (iv) approving annual project work plans and budgets, at the proposal of the Project Manager (PM); (v) approving any major changes in project plans or programmes; (vi) overseeing reporting in line with GEF requirements; (vii) ensuring

commitment of human resources to support project implementation, arbitrating any issues within the project (ix) negotiating solutions between the project and any parties beyond the scope of the project; (x) overall project evaluation and (xi) ensuring that UNDP Environmental and Social Screening Procedure safeguards are applied to project implementation.

222. Specific PB membership and terms of reference will be finalized during the Project Inception Workshop.

Technical Advisory Group on Protected Areas
223. A Technical Advisory Group on Protected Areas (TAGPA) will be established to provide technical advice and inputs relating to project implementation and will be chaired by the NPD with support from the PM/CTA.

Membership
224. The members of the TAGPA will consist of representatives from MOECAF (including FD), UNDP, other relevant government agencies, research and educational organizations, NGOs (including WCS), technical experts and other relevant stakeholders to be agreed by the PB. Technical experts may be invited in to discuss specific issues.

Functions
225. While the TAGPA will primarily focus on project-related issues, the intention is that this group would evolve to provide technical support to NWCD on a wide range of issues concerning the protected areas system. The very dynamic policy, regulatory and planning environment, coupled with extremely rapid growth in socio-economic development pressures impinging on the natural environment, and an associated rapid increase in international donor and conservation organization interest make this an especially challenging period for NWCD with many issues to contend with.

226. During the project period, the TAGPA will provide a means of updating related stakeholders at the national level about project implementation progress, to share lessons learned from project implementation, to obtain information about and coordinate with related initiatives, and to obtain technical advice on specific issues. There should be an option to request the TAGPA or a subset of its members to undertake specific project-related tasks, such as preparing or reviewing analytical reports, strategies and action plans, etc.

Institutional Arrangements
In close cooperation with MOECAF and UNDP, the Wildlife Conservation Society (WCS) will act as the Implementing Partner through the CSO implementation modality. WCS is a charitable, scientific, and educational non-governmental organization based in New York, USA. See **Annex 12** for the CSO Capacity Assessment for WCS.

227. WCS was the first environmental NGOs to sign an MOU with the Myanmar government beginning in 1993. Since that time WCS has maintained a presence in the country and is currently working under the 5th MOU with MOECAF.

228. In 1993, WCS began a programme of zoological exploration and capacity building focused on the Nature and Wildlife Conservation Division (NWCD) of the Forest Department. This program resulted in the creation of a number of new protected areas for the country including Lampi NP, Hkakaborazi NP, Hponkanrazi WS and the Hukaung Valley WS and its extension. Following the creation of these large PAs WCS moved towards building the capacity of NWCD staff to effectively manage some of these PAs. During this period WCS has supported NWCD to conduct surveys for tigers, Asian elephants, hoolock gibbons, large waterbirds, vultures as well as turtles and tortoises. Extensive consultation and planning with local communities has developed a series of community-based natural resource management pilot sites and these experiences are now informing important policy changes now ongoing in the country.

229. Through the cooperation with the Land Core Group of the Food Security Working Group as well as the Community Forestry Working Group, WCS's experiences have been shared with government and CSO partners and are beginning to be used elsewhere in the country by other organizations. At a broader policy level WCS contributed to the National Biodiversity Strategy and Action Plan as well as supported Myanmar's commitments to the CBD. WCS also led a process with government and civil society to develop the Myanmar Biodiversity Conservation Investment Vision, which outlines key species and key biodiversity areas (KBAs) across the country in need of increased conservation investment.

230. WCS in Myanmar also has an MOU with the Ministry of Livestock, Fisheries and Rural Development to support conservation and research activities on freshwater and marine conservation issues.

231. The context of these agreements is based on the priority accorded to conservation and natural resource management in Myanmar, the long history of collaboration between the organisations and the desire to promote the development of research, training, education and conservation activities. The mutual objective of this cooperative relationship is to promote and support the conservation of biological diversity in Myanmar through research on species and ecosystems, protected area management and through professional training in wildlife protection and research. WCS responsibilities include scientific research, technical support, project development assistance, oversight and delivery of training and capacity building, community engagement, liaison with agency in relation to environmental regulation, mobilisation of donor funding. Forest Department responsibilities include implementation of projects and activities for sustainable management of NR, support for community conservation, assignment of staff to work as WCS counterparts as well as support for travel permits and tax exemptions. Under these agreements WCS is the principal technical wildlife conservation and protected areas partner of the Forest Department.

232. WCS has worked with over sixty communities across the northern Forest Complex, with over a dozen now developing village land use committees and natural resource and land management plans. This process links communities to PA planning, providing a starting point for true co-management decisions in future. WCS has also successfully trained and supported national forest guards in three of the four targeted PAs as well as in four other PAs in Myanmar. WCS has also run training programs related to key species monitoring and law enforcement that have brought hundreds of staff together from across the PA network. WCS has developed and maintains three model environmental education teams in 3 of the 4 target PAs. These groups are composed of locally trained ethnic youth that then conduct outreach and awareness raising across all communities in each PA, building local support for sustained conservation action.

233. With over fifty national and international staff in country; established offices in Putao, Tanai and Htamanthi already supporting the Forest Department; over twenty years of proven cooperation with MOECAF including protected area development and management; and over 4,000 global staff with 150 PhDs to provide technical backstopping, WCS is uniquely positioned to execute this project.

Project Management

Project Management at the central level

234. WCS in cooperation with MOECAF will take overall responsibility for the timely and verifiable attainment of project objectives and activities.

235. The Project Manager will be a newly hired international expert in PA management and will be responsible for the day to day administration and implementation of the project, on behalf of the implementing partner and within the framework delineated by the Project Board. S/he will provide technical expertise, review and prepare TOR's and review the outputs of consultants and other sub-contractors. S/.e will work in close cooperation with the MOECAF in Nay Pyi Taw as well as NWCD, provincial and township Forest Department staff. The Project Manager (also considered the Chief Technical Advisor, CTA) with the assistance of other WCS technical experts and WCS Deputy Country Program Director (a Myanmar national who will act as Project Coordinator). Specifically, the Project Manager will:

- Plan the activities of the project and monitor progress against the approved work-plan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments, or reimbursement using the UNDP provided format;
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;

- Capture lessons learnt during project implementation;
- Perform regular progress reporting to the project board as agreed to with the board;
- Prepare the annual review report, and submit the report to the project board and the outcome group;
- Prepare the annual work plan for the following year, as well as quarterly plans if required.

Existing WCS senior staff experts will also provide assistance in protected area management, socio-economic/community conservation, conservation management planning, survey and monitoring. The Director Regional Conservation Hub will provide technical support to ensure effectiveness of outputs. Various technical experts will be recruited to assist the Project Manager and NWCD staff with implementation of project activities.

236. Recruitment of specialist services for the project will be done by the PM in consultation with the UNDP and the MOECAF. The PM will also liaise and work closely with all partner institutions to ensure good coordination with other complementary national programmes and initiatives. The organogram for project management (see **Section IV Part II**) illustrates the working relationship between all the main project implementing parties or bodies.

Project Management at the Site Level

237. Site level project management will be the responsibility of WCS with support from MOECAF and PA management units at the four demonstration PAs. Existing management capacity at each of the four demonstration PAs is outlined in the site profiles (see **Annex 6**) and the baseline management capacity of the responsible subnational government offices is indicated in the capacity development scorecards (**Annex 2**). The distribution of the demonstration PAs among different administrations is outlined in **Table 6** below:

PAs	Township	Area(sq.mile)	District/ SAZ	% in District/ SAZ	State/ Region
Hkakaborazi NP	Naungmon	1891.3	Putao	100%	Kachin
Hponkanrazi WS	Naungmon	361.6	Putao	100%	Kachin
	Putao	865.2	Putao		Kachin
Hukaung Valley WS	Tanai	3722.0	Myitkyina	62%	Kachin
	Phakant	1103.0	Myitkyina		Kachin
	Khamti	969.0	Khamti	13%	Sagaing
	Namyum	1926.9	Naga SAZ	25%	Sagaing
Htamanthi WS	Homalin	625.3	Homalin	67%	Sagaing
	Khamti	309.3	Khamti	33%	Sagaing

Table 6. Distribution of demonstration PAs among different administrative areas

238. The WCS Myanmar Programme has been contributing funds for development of Hkakaborazi NP since 1999 including infrastructure and capacity building, while neighbouring Hponkanrazi WS has no management staff or facilities. The project will establish a management office in Putao (Kachin State) to coordinate activities jointly for both of these PAs, and to work with Kachin Forest Department. WCS has provided technical and financial assistance to the Hukaung Valley WS continuously since 2005. The project will establish a management office at the WS HQ in Tanai Town (Kachin State), and will work closely with Kachin Forest Department. As part of Hukang Valley WS as well as all of Htamanthi WS are in Sagaing Region, the project will work closely with Sagaing Forest Department.

239. The project's community participation strategy (see **Annex 10**) will start out with identifying key communities within each PA to work with on specific issues, according to baseline information and consultations during the PPG. It recognizes the need for strong CBOs as effective partners for sustainable PA management, and will seek to strengthen existing CBOs and develop new CBOs to fulfil such roles. The

CBOs will be responsible for specific tasks at the demonstration sites and will be supported by central project management and the PA management teams. WCS will appoint experienced staff to act as focal points for community engagement and development, and will assign and train community facilitators to lead the community participation and capacity development processes. At least 30% of the community facilitators will be women. The project will also strengthen the representation of stakeholders including local communities on committees supporting site management. There will be proactive consideration of the involvement of women and ethnic minorities on local level committees and groups related to project activities including community co-management, training, alternative livelihoods and awareness activities. See the **Stakeholder Participation Plan in Section IV Part IV** for further details.

PART IV: Monitoring and Evaluation Plan and Budget

MONITORING AND REPORTING[75]

240. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from the UNDP/GEF Regional Coordination Unit in Bangkok. The Strategic Results Framework in **Section II Part I** provides performance and impact indicators for project implementation along with their corresponding means of verification. The M&E plan includes: inception report, project implementation reviews, quarterly and annual review reports, and mid-term review and final evaluation. The following sections outline the principal components of the M&E Plan and indicative cost estimates related to M&E activities (see **Table 7** below). The project's M&E Plan will be presented and finalized in the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

241. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate. A fundamental objective of the Inception Workshop will be to assist the project team to understand and take ownership of the project's goal and objective, as well as finalize preparation of the project's first Annual Work Plan (AWP) and annual and quartely activity plans on the basis of the Strategic Results Framework. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise, finalizing the AWP with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project. A gap analysis on the implementation of the ABS framework should also be conducted during project inception to confirm the scope of the project intervention.

242. A detailed schedule of project review meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Day-to-day monitoring of implementation progress will be the responsibility of the Project Manager based on the project's Annual Work Plan, activity plansand its indicators. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at the Inception Workshop and included in the AWP. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

243. Measurement of impact indicators related to biodiversity conservation targets will occur according to the schedules defined in the Inception Workshop. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the Implementing Partner, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

244. Annual Monitoring will occur through the PB Meetings (PBM). This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to PBMs at least two times a year. The first such meeting will be held within the first six months of the start of full implementation.

[75] As per GEF guidelines, the project will also be using the BD 1 Management Effectiveness Tracking Tool (METT). New or additional GEF monitoring requirements will be accommodated and adhered to once they are officially launched.

245. The Project Manager in consultations with UNDP-CO and UNDP-GEF RCU will prepare a UNDP/GEF PIR during the months of June-August. In addition, the Project Manager, in consultation with UNDP-CO will prepare an Annual Review Report (ARR) by the end of January and submit it to PB members at least two weeks prior to the PBM for review and comments. The ARR will be used as one of the basic documents for discussions in the PBM. The Project Manager will present the ARR (and if needed the PIR) to the PB, highlighting policy issues and recommendations for the decision of the PBM participants. The Project Manager also informs the participants of any agreement reached by stakeholders during the PIR/ARR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary. The PB has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

246. The terminal PBM is held in the last month of project operations. The Project Manager is responsible f[illegible] minal Report and submitting it to UNDP-CO and UNDP-GEF RCU. It shall be prepared in draft at least two months [illegible] minal PBM in order to allow review, and will serve as the basis for discussions in the PBM. The terminal meeting cons[illegible] on of the project as a whole, paying particular attention to whether the project has achieved its stated objectives anc[illegible] oader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainabilit[illegible] d acts as a vehicle through which lessons learnt can be captured to feed into other projects.

247. UNDP Country Offices and UNDP-GEF RCU as appropriate, will conduct yearly visits to project sites based on an agreed upon schedule to be detailed in the project's Inception Report/Annual Work Plan to assess first hand project progress. Any other member of the Project Board can also accompany.

Project Reporting

248. The Project Manager will be responsible for the preparation and submission of the following reports that form part of the monitoring process. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. An Annual Review Report (ARR) shall be prepared by the Project Manager and shared with the Project Board. As minimum requirement, the ARR shall consist of the Atlas standard format for the Project Progress Report (PPR) covering the whole year with updated information for each element of the PPR as well as a summary of results achieved against pre-defined annual targets at the project level. The ARR should consist of the following sections: (i) project risks and issues; (ii) project progress against pre-defined indicators and targets and (iii) outcome performance. The Project Implementation Review (PIR) is an annual monitoring process mandated by the GEF. Once the project has been under implementation for a year (from the CEO approval date), a Project Implementation Report must be completed by the CO together with the project team. Quarterly progress reports: Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF RCU by the project team. UNDP ATLAS Monitoring Reports: A Combined Delivery Report (CDR) summarizing all project expenditures, is mandatory and should be issued quarterly following the finalization of the quarterly progress reports. The following logs should be prepared: (i) The Issues Log is used to capture and track the status of all project issues throughout the implementation of the project. (ii) the Risk Log is maintained throughout the project to capture potential risks to the project and associated measures to manage risks; and (iii) the Lessons Learned Log is maintained throughout the project to capture insights and lessons based on good and bad experiences and behaviours. Project Terminal Report: During the last three months of the project the project team will prepare the Project Terminal Report. Periodic Thematic Reports: As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs.

External Evaluations

249. The project will be subjected to at least one independent external review and one evaluation: An independent Mid-Term Review will be undertaken at the mid-point of the project lifetime. The Mid-Term Review will determine progress being made towards the achievement

of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Furthermore, it will review and update the ESSP report. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The ToR for this Mid-term review will be prepared by the UNDP CO based on guidance from the UNDP-GEF Regional Coordinating Unit.

250. An independent Final Evaluation will take place three months prior to the terminal Project Board meeting, and will focus on the same issues as the mid-term review. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The ToR for this evaluation will be prepared by the UNDP CO based on guidance from the UNDP-GEF Regional Coordinating Unit.

Learning and Knowledge Sharing

251. The project will develop a communications strategy in the first year, which will be updated annually and implementation supported by a major subcontracted social marketing campaign in Component 1, plus three national education consultants for the project sites in Component 2. This will include capturing and disseminating lessons learned, for review at PB meetings in order to inform the direction and management of the project, and shared with project stakeholders as appropriate. A project completion report will document the project's achievements and lessons learned at the end of the project. Results from the project will also be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums.

Branding and Visibility

252. Full compliance is required with UNDP's Branding Guidelines and guidance on the use of the UNDP logo. These can be accessed at http://web.undp.org/comtoolkit/reaching-the-outside-world/outside-world-core-concepts-visual.shtml. Full compliance is also required with the GEF Branding Guidelines and guidance on the use of the GEF logo. These can be accessed at http://www.thegef.org/gef/GEF_logo. The UNDP and GEF logos should be the same size. When both logs appear on a publication, the UNDP logo should be on the left top corner and the GEF logo on the right top corner. Further details are available from the UNDP-GEF team based in the region.

Audit Clause

253. Audits will be conducted according to UNDP Financial Regulations and Rules and applicable Audit policies.

Table 7. M&E Activities, Responsibilities, Budget and Time Frame

Type of M&E activity	**Responsible Parties**	**Budget US$** *Excluding project team staff time*	**Time frame**
Inception Workshop	Project Coordinator UNDP CO UNDP GEF	10,000	Within first two months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be finalized in Inception Phase and Workshop. Indicative cost: 15,000.	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	Oversight by Project Manager Project team	To be determined as part of the Annual Work Plan's preparation. Indicative cost: 5,000 (annually); total: 25,000	Annually prior to ARR/PIR and to the definition of annual work plans

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team staff time*	Time frame
ARR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
Quarterly progress reports	Project team	None	Quarterly
CDRs	Project Manager	None	Quarterly
Issues Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Risks Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Lessons Learned Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Mid-term Evaluation	Project team UNDP- CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)	40,000	At the mid-point of project implementation.
Final Evaluation	Project team, UNDP-CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)	40,000	At the end of project implementation
Terminal Report	Project team UNDP-CO local consultant	0	At least one month before the end of the project
Lessons learned	Project team UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)	12,000 (average 3,000 per year)	Yearly
Audit	UNDP-CO Project team	15,000	Yearly
Visits to field sites	UNDP CO UNDP RCU (as appropriate) Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST *Excluding project team staff time and UNDP staff and travel expenses*		US$ 157,000	

PART V: Legal Context

254. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Myanmar and the United Nations Development Programme, signed by the parties on17 September 1987. The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

a. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where

the project is being carried;
b. assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

255. The UNDP Resident Representative in Yangonis authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-EEG Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;

b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

SECTION II: STRATEGIC RESULTS FRAMEWORK (SRF) AND GEF INCREMENT

PART I: Strategic Results Framework, SRF (formerly GEF Logical Framework) Analysis

INDICATOR FRAMEWORK AS PART OF THE SRF

Strategic Results Framework – Strengthening Sustainability of Protected Area Management in Myanmar

Project's Development Goal: To contribute to the conservation and sustainable use of globally significant biodiversity in Myanmar

<table>
<tr><th>Objective/ Outcome</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Risks and assumptions</th></tr>
<tr>
<td>Objective: Strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing</td>
<td>▪ Increased coverage of Myanmar's terrestrial and aquatic PA network managed by the Forest Department to 10% (6,765,530 ha) of the country's land-area from the current 5.6% (3,788,697 ha) with increased coverage of under-represented ecoregions and essential corridors (see inset table)
<table>
<tr><th>Ecoregion</th><th>Current % Protected</th><th>Target % Protected</th></tr>
<tr><td>Chin Hills-Arakan Yoma montane forest</td><td>3.60%</td><td>3.60%</td></tr>
<tr><td>Eastern Himalayan alpine shrub and meadow</td><td>96.46%</td><td>96.46%</td></tr>
<tr><td>Irrawaddy dry Forest</td><td>0.45%</td><td>3.0%</td></tr>
<tr><td>Irrawaddy fresh water swamp forest</td><td>0.04%</td><td>Potential to increase limited</td></tr>
<tr><td>Irrawaddy moist deciduous forest</td><td>1.82%</td><td>3.0%</td></tr>
<tr><td>Kayah-Karen montane rain forest</td><td>0.60%</td><td>1.5%</td></tr>
<tr><td>Mizoram-Manipur- Kachin Rain forest</td><td>7.26%</td><td>7.26%</td></tr>
</table>
</td>
<td>5.6% coverage (3,788,697 ha) of Myanmar's terrestrial and aquatic ecosystems. See inset table for baseline representation of ecoregions.</td>
<td>10% coverage (6,765,530 ha) of Myanmar's terrestrial and aquatic ecosystems, with increased coverage of under-represented ecoregions (see inset table)</td>
<td>Official Forest Department information; GIS/RS analysis</td>
<td>Risks:
-Exploitation of wildlife and forest products driven by increased international trade and demand for land may severely impact conservation
-Political tension between ethnic groups and central govt may limit ability to implement activities
-Climate change may undermine conservation objectives of the project

Assumption:
The Myanmar Government continues to be committed to the extension and improved management of the PA system in the face of other demands for land and resources.</td>
</tr>
</table>

<table>
<tr><th>Objective/ Outcome</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Risks and assumptions</th></tr>
<tr><td></td><td>
<table>
<tr><td>Myanmar Coast mangrove</td><td>0.92%</td><td>3.0%</td></tr>
<tr><td>Myanmar coastal rain forest</td><td>0.69%</td><td>Potential to increase limited</td></tr>
<tr><td>Northern Indochina subtropical forest</td><td>0.90%</td><td>Potential to increase limited</td></tr>
<tr><td>Northern Triangle subtropical forest</td><td>35.56%</td><td>35.56%</td></tr>
<tr><td>Nujiang Langcang Gorge alpine conifer and mixed forest</td><td>0.00%</td><td>3.0%</td></tr>
<tr><td>Tenasserim-south Thailand semi-evergreen rain forest</td><td>5.16%</td><td>25.00%</td></tr>
<tr><td>Tropical and subtropical moist broadleaf forests</td><td>6.04%</td><td>6.04%</td></tr>
</table>
</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>
Improved habitat conditions at local level indicated by percentage change in forest cover caused by encroachment in Core Areas of PAs measured through remote sensing three times during the project.
<table>
<tr><th>Protected Area</th><th>Baseline forest cover[76] (% change / year)</th><th>Target forest cove (% change / year)</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Hkakaborazi National Park</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary</td><td>0.95%</td><td>0.5%</td></tr>
</table>
</td><td>See inset table for baseline annual rate of change in forest cover and encroachment by PA</td><td>See inset table for target annual rate of change in forest cover and encroachment by PA</td><td>Project reports based on three remote sensing assessments</td><td></td></tr>
<tr><td></td><td>▪ Financial Sustainability of PA System (See Annex 3)</td><td>Baseline Financial Sustainability Scorecard score (October 2013) 15%</td><td>Target Financial Sustainability Scorecard score 25%</td><td>Project reports on Financial Sustainability Scorecard</td><td></td></tr>
</table>

[76]Baseline rates of change in forest cover are not available for the four protected areas. The national average rate of 0.95% has therefore been used as a proxy, although local rates will vary. The baseline rates for the demonstration PAs will be updated based on the official 2013 forest cover map due for publication by 2015.

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Risks and assumptions
Outcome 1: Enhanced systemic, institutional and financial frameworks for PA expansion and management	**Outputs:** Output 1.1: Strengthened national policies relating to PA management and biodiversity conservation Output 1.2: Capacity of the Forest Department strengthened for effective management of the PA system Output 1.3: Training Programmes targeting PA managers institutionalised within the Forest Department Output 1.4: A system-wide strategy for sustainable financing of the PA network is developed and piloted for the expanded PA system Output 1.5: Sub-national government units associated with the four demonstration PAs incorporate PA values into regional and local development Output 1.6: National PA system expanded based on gap analysis for terrestrial ecosystems and PA network review				
	1.1.Strengthened national policies and legislation address the following key issues for the PA system: a) enabling PAs to have access to funds raised through sustainable financing; b) integrating valuation of ecosystem services (ES) into national land use planning; c) clarifying the legal status of PA buffer zones and rationalization of approaches toward them; d) clarifying the governance arrangements for coastal PAs; and e) enabling local people to use and benefit from sites within Protected Areas.	a) PAs currently only access government funding; b) values of ES not considered in national land use planning; c) PA buffer zones vary in location and legal status; d) governance responsibilities for coastal PAs are complex and unclear; e) local people have no legal use rights within PAs.	a) PAs can access diverse sources of funding for management; b) national land use planning policy incorporates valuation of ES; c) PA buffer zones are given specific and consistent legal recognition; d) governance of coastal PAs is clarified in national policy and law; e) legislation passed to enable local use of land within PAs with appropriate	Official MOECAF reports and reports of related government agencies	**Risks:** -Exploitation of wildlife and forest products driven by increased international trade and demand for land may severely impact conservation -Political tension between ethnic groups and central govt may limit ability to implement activities and access sources of funding -Climate change may undermine conservation objectives of the project **Assumption:** The Myanmar Government continues to be committed to the extension and improved management of the PA system in the face of other demands for land and resources.

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Risks and assumptions
			safeguards.		
	1.2.Improved institutional capacity of the Forest Department for the PA system planning and management as indicated by the Capacity Development Scorecard (see **Annex 2**)* *Combined average for NWCD, Sagaing region, Kachin state, the Training and Research Development Division and the Planning and Statistics Division	Capacity Development Scorecard baseline: 45%	Capacity Development Scorecard target: 67%	Project reports on Capacity Development Scorecard	
	1.3.Certificate-level PA management modules are established for the use of the Forest Department and incorporated into their regular curricula at Yezin University of Forestry and Central Forestry Development Training Centers as appropriate	No formal training courses on PA management are available in Myanmar	Certificate-level PA management modules are incorporated into regular curricula at Yezin UoF and CFDTCs. At least 150 FD field staff trained and certified in Conservation Management and Community	Official Forest Dept. and Yezin University reports	

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Risks and assumptions
			Outreach for PAs[77].		
	1.4.100% increase in total budget allocated to the protected areas in real terms compared to the baseline as indicated by the financial sustainability scorecard (see **Annex 3**).	US$ 750,000[78] per year as indicated by the financial sustainability scorecard.	100% increase in budget allocated to the protected areas in real terms compared to baseline as indicated by the financial sustainability scorecard.		
Outcome 2. Strengthened management	**Outputs:** Output 2.1: Strengthening management through business plans for the four demonstration PAs Output 2.2: Demonstration PA site operations strengthened to address existing threats to biodiversity				

[77] This would include SMART enforcement patrolling, biological monitoring of key ecosystems and threatened species, techniques for community-based conservation and environmental education at Central Forestry Development Training Centers.SMART (Spatial Monitoring and Reporting Tool) patrol system developed by WCS and partners globally is based on an established tool called Management Information System (or MIST). MIST allows rangers on field patrol to use handheld GPS devices to record geospatial and metadata information about encounters with poachers, snares, and other types of disturbance and encroachment in the protected area. Rangers also collect information about sightings or signs of key species they encounter. The field data is subsequently downloaded from the GPS device to a central computer where it is aggregated as a local and/or national level dataset. This compiled data gives protected-area managers and other conservation stakeholders an unparalleled 'big picture' view of where resources are most needed and where they can most effectively be deployed.

[78] Based on the exchange rate of 800 kyat = 1 US$.

<table>
<tr><th>Objective/ Outcome</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Risks and assumptions</th></tr>
<tr><td rowspan="3">and threat reduction in the target PAs and buffer zones</td><td colspan="5">Output 2.3: Pilot systems developed and implemented for community participation at the four demonstration PAs
Output 2.4 Analysis of drivers and planning for forestry and wildlife law enforcement in Kachin State
Output 2.5 Increased capacity for monitoring, assessing and reporting the impacts of improved PA management on ecosystems, key species, threats and local livelihoods</td></tr>
<tr><td>2.1.Reduction of threats at the local level indicated by an eventual reduction in the number of individuals stopped inside the PA for illegal activities as shown in SMART monthly patrolling reports. See Annex 9 for baseline.
<table>
<tr><th></th><th></th><th colspan="5">SMART Target*</th></tr>
<tr><th>Protected Area</th><th>SMART Baseline*</th><th>Y1</th><th>Y2</th><th>Y3</th><th>Y4</th><th>Y5</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
<tr><td>Hkakaborazi National Park</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary</td><td>0</td><td>10</td><td>20</td><td>15</td><td>8</td><td>5</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary</td><td>20</td><td>30</td><td>40</td><td>30</td><td>15</td><td>10</td></tr>
</table>
*Catch effort /100km patrol distance</td><td>See inset table for baseline rate of individuals stopped per year for illegal activities for every 100km patrolled in each PA</td><td>See inset table for predicted annual target rates of individuals stopped per year for illegal activities for every 100km patrolled in each PA</td><td>SMART monthly patrolling reports for each PA</td><td rowspan="2">Risks:
-Exploitation of wildlife and forest products driven by increased international trade and demand for land may severely impact conservation
-Political tension between ethnic groups and central govt may limit ability to implement activities

Assumption:
Subnational government agencies are committed to the extension and improved management of the PA system in the face of other demands for land and resources.</td></tr>
<tr><td>2.2.Stable or increased encounter rates for key indicator species in each demonstration PA based on annual summaries of SMART patrolling data and focused auditory surveys for gibbons.</td><td>Encounter rate of 2 Hoolock Gibbon groups/ km^2 for Hukaung valley WS, Hponkanrazi WS and Htamanthi WS. 2.5 ungulate sign observations/ 100 km patrolled for</td><td>Encounter rate of 2 Hoolock Gibbon groups/ km^2 and 2.5 ungulate sign observations/ 100 km patrolled for all four demonstration sites</td><td>Annual analyses of SMART monthly patrolling reports and focused auditory surveys for each PA</td></tr>
</table>

<table>
<tr><th>Objective/ Outcome</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Risks and assumptions</th></tr>
<tr><td></td><td></td><td>Htamanthi WS. Baselines for other sites to be completed during Year 1.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>2.3.Improved management effectiveness of individual PAs covering 2,604,000 ha, indicated by the % increase in the METT assessment (see Annex 3):
<table>
<tr><th>Protected Area</th><th>METT Baseline Score</th><th>METT Target Score</th></tr>
<tr><td>Hukaung Valley Wildlife Sanctuary (1,737,300 ha)</td><td>52%</td><td>82%</td></tr>
<tr><td>Hkakaborazi National Park (381,200 ha)</td><td>51%</td><td>83%</td></tr>
<tr><td>Hponkanrazi Wildlife Sanctuary (270,400 ha)</td><td>12%</td><td>69%</td></tr>
<tr><td>Htamanthi Wildlife Sanctuary (215,100)</td><td>49%</td><td>82%</td></tr>
</table></td><td>See inset table for METT Baseline scores</td><td>See inset table for METT Target scores</td><td>Project reports on METT applied at PPG, midterm and project completion</td><td></td></tr>
<tr><td></td><td>2.4.Community participation systems piloted at demonstration PAs and incorporated into management plans</td><td>No existing systematic measures for community participation at demonstration PAs</td><td>Community participation systems piloted at demonstration PAs andincorporated into management plans</td><td>Project reports evaluating pilot activities; revised site management plans</td><td></td></tr>
</table>

256. A detailed activity list and a chronogram of activities per output is under development and will be finalised upon project inception.

Part II: Incremental Cost Analysis

Baseline Trends

257. **In the baseline situation,** without GEF investment in the proposed project, a lack of capacity and resources, insufficient political support and an inability to expand management systems will mean that threats to the PAs and their associated biodiversity and ecosystem services will continue to grow. Amidst the frenzy of fast economic development, substantial amounts of important biodiversity will be lost and degraded in coming decades. Although there are some long-established PAs in Myanmar, there has been no systematic approach to protected area management. The PA network is only now being established, and lacks appropriate institutional structures, management capacity and particularly sources of long-term financing. National government investment in PAs has historically been very low, and current allocations are insufficient to support even routine operational costs such as patrolling or community outreach. This falls far short of the amounts needed to ensure even basic management. Details of the funds available for PA system management against estimated needs are given in the GEF Financial Sustainability Scorecard in **Annex 3**.

258. Against this backdrop, there have been some positive and systematic approaches towards strengthening the management and protection of natural resources, notably through implementation of the Forest Master Plan (2001), which aims to expand the PA network to 10% of land area. A national REDD+ readiness road mapand programme are under development, a National Tiger Recovery Plan has been developed, and both international donor programmes and INGOs continue to contribute positively towards biodiversity conservation in Myanmar.

259. **However, without GEF investment in the proposed project**, the key barriers identified during project formulation will remain, including the weak capacity of the agency responsible for PA system management, inadequate financing for PA management, the fluid situation of the government in the current transitional period and overwhelming economic interest in the country. As a consequence, the threats are intensifying rapidly, and even biodiversity within the PA system is not shielded from the afore-mentioned threats. Insufficient management capacity and motivation at the individual PA level to manage local threats and achieve conservation outcomes also remains a significant barrier towards effective management and the removal of threats to biodiversity. Overall, there has been no attempt to improve the national PA system in the country as a whole by systematically targeting barriers at different levels of PA administration – at national, state government and site levels.

Global Environmental Objectives

260. The project will contribute directly towards the achievement of GEF Biodiversity Objective 1: Improve Sustainability of Protected Area Systems (BD1), including GEF Outcome 1.1: Improved management effectiveness of existing and new PAs through increased capacity and standardized practices to improve management and planning especially linked to local community participation and financial planning, while at the national level the overall coverage of the terrestrial and aquatic PA system will be increased from 3,788,697 ha (5.6% of Myanmar's land area) to 6,765,530 ha (10%) with increased coverage of under-represented ecoregions and essential corridors. The project will also strengthen capacity to plan and manage the PA system and individual PAs at national, sub-national and local levels. The project will also contribute directly to GEF Outcome 1.2: Increased revenue for the PA system by identifying opportunities for sustaining financial

support to the PA network and developing a clear policy framework for funds to be used for PA management. The project will also contribute to the implementation of PoWPA (2012) and achievement of the CBD Aichi Targets, in particular to Target 11 through increasing significantly the coverage and connectivity of the PA system in important regions with high biodiversity importance and significant ecosystem services, and by increasing management effectiveness of the PA system in a way that is integrated into the wider landscapes.

GEF Alternative

261. In the alternative scenario enabled by the GEF, systemic and institutional barriers to improved PA management and sustainable financing in Myanmar will be removed at the national, regional and site levels. The objective of the proposed project is to strengthen the terrestrial system of national protected areas for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing. This will be secured through two project components. Myanmar is experiencing a rapid boom in development after over 50 years of relative isolation. This unique period in history allows a tremendous opportunity to benefit the global environment by addressing local, national, and global environmental challenges and to promote sustainable livelihoods and biodiversity conservation in Myanmar. The project plans to strengthen PA management in three Priority Conservation Corridors identified by the Mynamar NBSAP, identify sustainable funding opportunities for four focal PAs in those corridors and integrate PA management and finance into broader state and national level development planning. Lessons from the selected demonstration PAs will be used to increase the overall effectiveness of the national PA system.

262. The first stage of the PA expansion will be achieved with PAs expanded to at least 10% of the national terrestrial area, with more complete representation of the globally significant ecosystems within the country. Financing for the PA system will be improved using economic tools and by increasing government investment as well as establishing new revenue streams. Capacity of the MOECAF will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, SMART patrolling and law enforcement monitoring system. National policies and legislation relating to the PA system will be reviewed and strengthened, as well as subnational planning and development processes.

263. On the ground, PA management will be significantly improved at the four demonstration PAs located in three high priority conservation corridors, through management planning, capacity development for operational management (including law enforcement, monitoring, biodiversity surveys, community participation, outreach, etc). The lessons learnt from these PAs will be used to increase capacity nationwide by drawing on successful practices and mainstreaming them into national training programmes at the Yezin University of Forestry and the Central Forestry Department Training Centre (CFDTC) to systematically train Forest Department staff. Opportunities at the site level will determine pilots to sustainably finance their operations. These ground level activities will be used to raise the awareness of relevant decision makers concerning the PA network and ensure that all PAs in the country are integrated into national level land-use planning.

System Boundary

264. The project aims to achieve the *in situ* conservation of Myanmar's terrestrial and aquatic protected areas system (see **Figure1**), including full representation of the ecoregions and key species that occur within the country. Geographically, the project is limited to

Myanmar's national boundaries, following a stratified multi-level approach to achieve the project outcomes. Some aspects of the project (Component 1) aim to strengthen the entire national PA system, including professional competency standards, institutional capacity building, PA strategic planning and financing, awareness raising and mainstreaming into policy and regulatory frameworks. Component 2 focuses on strengthening the management effectiveness of the demonstration PAs located in the Northern Forest Complex (see **Figure 2**) through capacity building, management and financial planning, community participation, monitoring and evaluation and information sharing. Overall, the project strategy aims to achieve a greatly strengthened and expanded terrestrial PA network that effectively conserves Myanmar's extraordinarily diverse and valuable ecosystems with a strengthened financial basis to support effective operational management. Baseline and incremental costs have been assessed over the five-year life span of the project.

Summary of Costs

265. The Baseline associated with this project is estimated at US$142.5 million. The GEF Alternative has been costed at US$ 165.3 million. The total Incremental Cost to implement the full project is US$ 22.8 million. Of this amount, US$6.6 million is requested from GEF. GEF funds have leveraged US$ 17.9 million in co-financing for the Alternative Strategy. Costs have been estimated for five years, the duration of the planned project Alternative. These costs are summarized below in the incremental costs matrix (**Table 8**).

Table 8. Incremental Cost Matrix

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
BENEFITS			
Global benefits	In the baseline, there has been no systematic approach to PA management. The PA network is only now being established, and lacks appropriate institutional structures, management capacity and particularly sources of long-term financing. National government investment in PAs has been very low, and current allocations are insufficient. Aside from piecemeal efforts, there is a lack of systematized training in modern conservation techniques. Insufficient funding, management capacity and motivation at the individual PA level to manage local threats and achieve conservation outcomes remains a significant barrier towards effective management. As a result, threats are	National terrestrial and aquatic PA system expanded to at least 10% of the national terrestrial area, with more complete ecoregion representation based on gap analysis. Financing for the PA system will be improved using economic tools and by increasing government investment as well as establishing new revenue streams. Capacity of the MOECAF will be strengthened through institutionalisation of training programmes, habitat/biodiversity monitoring, SMART patrolling and law enforcement monitoring system. National policies and legislation relating to the PA system will be reviewed and strengthened, as well as subnational planning and development processes. Capacity development will strengthen management effectiveness at the four demonstration PAs, through management and financial planning, training in operational management (including law enforcement, monitoring, biodiversity surveys, outreach, etc), introduction and piloting of community participation and sustainable livelihood approaches.	National coverage of the terrestrial and aquatic PA system will be increased from 3,788,697 ha (5.6% of Myanmar's land area) to 6,765,530 ha (10%) with increased coverage of under-represented ecoregions and essential corridors. Strengthened capacity to plan and manage the PA system and individual PAs at national, sub-national and local levels, reflected by CD scorecard assessments. Improvement management effectiveness for terrestrial PA system and demonstration PAs, reflected by METT assessments. Improved security of biodiversity demonstration sites as indicated by reduced forest encroachment and deforestation rates.

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
	intensifying and biodiversity losses increasing especially with growing socio-economic pressures and socio-political changes.		
National and local benefits	In the baseline, efforts to maintain forest and wetland ecosystem services (ES) are losing ground to development pressures, with current high deforestation rates. The massive economic potential of forest and wetland ES is being steadily eroded as a result of land conversion and degradation including encroachment into the PA system. This may impact future development options for fisheries, water supply, HEP, carbon sequestration, climate change adaptation and disaster risk reduction.	The planned expansion and strengthened management of the terrestrial and aquatic PA system will secure increased areas of natural resources in good condition, providing sustainable flows of ES that will support related development opportunities such as carbon trading, downstream HEP development, fisheries, etc; and reduce the impacts of climate change through ecosystem-based adaptation and improved livelihood security for communities dependent upon forest products. ES in PAs maintained through improved resource management including CBNRM, increased awareness of economic values of ES, and sustainable livelihood opportunities such as ecotourism development. Forest product extraction, fishing and other natural resource harvesting are regulated, community resource use are conflicts managed through agreements, and sustainable resource usage improved through awareness raising, alternative livelihoods and incentive schemes.	Ecosystem services provide sustainable flow of benefits to local communities and wider economy, including carbon sequestration, HEP potential, sustained clean water supplies, fisheries, and NTFPs. Increased tourism revenues and benefits to local communities from alternative land uses. Increased sustainability of land and resource uses provides greater security of income for local communities and consumptive uses increasingly replaced by service provision.
COSTS			
Outcome 1: Enhanced systemic, institutional and financial frameworks for PA expansion and consolidation	**Baseline: $116.5 Million**	**Alternative: $131.8 Million**	GEF $2,247,397 COF $13,056,300 **TOTAL** **$15,303,697**
Outcome 2: Strengthened management and threat reduction in demonstration PAs and buffer zones	**Baseline: $26 Million**	**Alternative: $33.5 Million**	GEF $3,500,000 COF $4,000,000 **TOTAL** **$7,500,000**
			PM-GEF $280,000 PM-COF $840,000

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
TOTAL COSTS	**Baseline: $142.5 Million**	**Alternative: $165.3 Million**	PM-TOTAL $1,120,000 Agency Fees $572,603 TOTAL GEF $6,600,000 TOTAL COF $17,896,300 **TOTAL IC (Alt-Baseline)** **$22.8 Million**

SECTION III: Total Budget and Workplan

Short Title:	Strengthening Sustainability of Protected Area Management in Myanmar
Award ID:	00072733
Project ID:	00085783
Business Unit:	MMR10
Project Title:	Strengthening Sustainability of Protected Area Management in Myanmar
PIMS#:	5162
Implementing Partners:	Ministry of Environmental Conservation and Forestry (MOECAF); Wildlife Conservation Society; UNDP Myanmar

GEF Outcome/ Atlas Activity	Imple-menting Agent/Responsible Party	Fund ID	Donor Name	Atlas Budgetary Acct Code	Atlas Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Budget Note
COMPONENT 1: Systemic, Institutional & Financial Framework for PA Expansion and Management	WCS	62000	GEF	71200	International Consultants	59,800.75	61,594.77	63,442.61	65,345.89	67,306.27	**317,490.29**	1
				71300	Local Consultants	12,600.00	12,978.00	13,367.34	13,768.36	14,181.41	**66,895.11**	2
				71400	Contractual Services - Individual	21,200.00	21,836.00	22,491.08	23,165.81	23,860.79	**112,553.68**	3
				71600	Travel	60,000.00	67,000.00	67,000.00	67,000.00	64,260.00	**325,260.00**	4
				72100	Contractual Services - Company	140,482.00	247,982.00	275,482.00	137,000.00	109,500.00	**910,446.00**	5
				72200	Equipment	20,000.00	10,000.00	10,000.00	5,000.00	5,000.00	**50,000.00**	6
				72400	Communications & AV Equipment	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	**25,000.00**	7
				74200	Audio-visual and printing production costs	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	**50,000.00**	8
				74500	Miscellaneous	2,600.00	2,600.00	2,600.00	2,600.00	2,502.00	**12,901.92**	9
					Total	**331,682.75**	**438,990.77**	**469,383.03**	**328,880.06**	**301,610.39**	**1,870,547.00**	
COMPONENT 2: Strengthened Management and Threat Reduction in the	WCS/ UNDP	62000	GEF	71200	International Consultants	38,920.37	40,087.99	41,290.62	42,529.34	43,805.22	**206,633.54**	10
				71300	Local Consultants	30,233.64	31,140.65	32,074.87	33,037.12	34,028.23	**160,514.53**	11

Demonstration PAs and Buffer Zones				71400	Contractual Services - Individual	40,665.42	41,885.38	43,141.94	44,436.20	45,769.29	**215,898.24**	12
				71600	Travel	40,000.00	47,000.00	47,000.00	47,000.00	41,720.00	**222,720.00**	13
				72100	Contractual Services - Company	538,800.00	511,300.00	548,800.00	488,800.00	543,300.00	**2,631,000.00**	14
				72200	Equipment	200,000.00	120,000.00	50,000.00	20,000.00	15,000.00	**405,000.00**	15
				72400	Communications & AV Equipment	800.00	800.00	800.00	800.00	800.00	**4,000.00**	16
				74200	Audio-visual and printing production costs	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	**15,000.00**	17
				74500	Miscellaneous	3,000.00	3,000.00	2,506.00	2,000.68	2,000.00	**12,506.68**	18
					Total	**895,419.43**	**798,214.02**	**768,613.43**	**681,603.34**	**729,422.74**	**3,873,273.96**	
PROJECT MANAGEMENT	WCS/ UNDP	62000	GEF	71200	International Consultants	8,000.00	8,240.00	8,487.20	8,741.82	9,004.07	**42,473.09**	19
				71400	Contractual Services - Individual	37,557.01	38,683.72	39,844.23	41,039.56	42,270.74	**199,395.26**	20
				71600	Travel	2,000.00	2,500.00	2,500.00	2,500.00	2,000.00	**11,500.00**	21
				72200	Equipment	10,000.00					**10,000.00**	22
				72400	Communications & AV Equipment	1,600.00	1,600.00	1,600.00	1,600.00	1,600.00	**8,000.00**	23
				74500	Miscellaneous	2,000.00	2,000.00	2,000.61	2,000.00	2,708.00	**10,708.65**	24
				74500	UNDP Cost Recovery	1,500.00					**1,500.00**	25
					Total	**62,657.01**	**53,023.72**	**54,432.08**	**55,881.37**	**57,582.82**	**283,577.00**	
TOTAL PROJECT						**1,289,759.20**	**1,290,228.51**	**1,292,428.56**	**1,066,364.78**	**1,088,615.95**	**6,027,397.00**	

Summary of Funds						
Source	Year 1	Year 2	Year 3	Year 4	Year 5	**Total**
GEF	1,289,759.20	1,290,228.51	1,292,428.56	1,066,364.78	1,088,615.95	6,027,397.00
Government	929,260.00	929,260.00	929,260.00	929,260.00	929,260.00	4,646,300.00
CSO	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00	1,250,000.00
UNDP						

	2,400,000.00	2,400,000.00	2,400,000.00	2,400,000.00	2,400,000.00	12,000,000.00
Total	4,869,019.20	4,869,488.51	4,871,688.56	4,645,624.78	4,667,875.95	23,923,697.00

Budget Notes

Component 1

1	International Consultant Inputs: International PA & BD Strategy Advisor (85W @ $2000 = $170,000); Landscape Conservation Int TA (30W @ $1200 = $36,000); Legal and Policy Analysis Int Specialist (18W @ $1600 = $28,800); PA Capacity Development Int Specialist (18W @ $1400 = $25,200); Sustainable Financing Int Specialist (18W @ $1600 = $28,800); Director Regional Conservation Hub (2,5W@$3923 = $9,808). 3% annual increase have been included; Total: $317,490
2	National Consultant Inputs: PA Capacity Development Nat Specialist (80W @ $300 = $24,000); Legal and Policy Analysis Nat Specialist (60W @ $300 = $18,000); Sustainable Financing Nat Specialist (50W @ $300 = $15,000); Biological Monitoring Nat Specialist (20W @ $300 = $6,000). 3% annual increase have been included Total: $66,895
3	Contractual Services - Individual Inputs: PA & BD Strategy Specialist (80W @ $1200 = $96,000); Landscape Conservation Nat Specialist (25W @ $400 = $10,000). 3% annual increase have been included. Total $112,554
4	Travel: International, regional and local travel costs for International Consultants for Outcome 1 activities: International PA & BD Strategy Advisor ($15,000); Landscape Conservation Int TA ($15,000); Legal and Policy Analysis Int Specialist ($35,600); PA Capacity Development Int Specialist ($10,600); Sustainable Financing Int Specialist ($55,080); short term training specialist inputs ($28,620). Travel for National Consultants: PA Capacity Development Nat Specialist ($3360). Forest Dept staff trainees to attend training courses, site visits and participate in Outcome 1 activities ($162,000). Total: $325,260.
5A	Contractual Services - Company: Short term training inputs by international experts (27W @ $1498 = $40,446) Output 1.3; Exchange visits for senior PA system staff for training purposes related to sustainable financing, key policy issues for the PA system and related subjects ($160,000) Output 1.3; provision of training equipment in support of capacity development programme in Outputs 1.2 and 1.3 ($100,000). Total: $300,446
5B	Contractual Services - Company: stakeholder consultation processes for a) policy review (Output 1.1) including meeting costs, allowances for working group members, related travel costs, documentation and communications ($130,000); b) capacity development process for the PA system (Output 1.2) including meeting costs, allowances for working group members, related travel costs, documentation and communications ($90,000); c) sustainable financing development for the PA system (Output 1.4) including meeting costs, allowances for working group members, related travel costs, documentation and communications ($90,000); consultation and applied research costs for series of sustainable financing studies (Output 1.4) ($50,000). Total: $360,000
5C	Contractual Services - Company: social marketing campaign to mainstream biodiversity conservation and the PA system into national and sub-national planning processes (Output 1.4) providing communication products based on financing studies (in Output 1.4) for key audiences including policy-makers and planners from the sub-national and local government agencies, commercial operators in tourism development (and other sectors), as well as the media. $250,000. Total: $250,000
6	Equipment: training equipment (outputs 1.2 and 1.3) - projectors, screens, flipcharts, whiteboards, computers and IT accessories,furniture ($50,000);

7	Communications costs for Outcome 1 activities
8	Audio-visual and printing for technical reports, training materials, awareness materials, etc.
9	Miscellaneous costs: sundry costs, contingency for currency exchange fluctuations
Component 2	
10	International Consultant Inputs: International PA & BD Strategy Advisor (CTA) (25W @ $2000 = $50,000); Landscape Conservation Int TA (100W @ $1,200 = $120,000); Sustainable Financing Int Specialist (9W @ $1,600 = $ 14,400). Director Regional Conservation Hub (2.5W@$3923 = $9,808). 3% annual increase have been included; Total: $206,634
11	National Consultant Inputs: PA Capacity Development Nat Specialist (50W @ $300= $15,000); Sustainable Financing Nat Specialist (20W @ $300 = $6,000); Community Pptn Nat Specialist (130W @ $300 = $39,000); Gender & community specialist (24W @ $480 = $ 11,520); Three Education & Community Nat Specialist (390W @ $120 = $46,800); Biological Monitoring Nat Specialist (110W @ $300 = $33,000). Total: $160,515
12	Contractual Services - Individual Inputs: PA & BD Strategy Specialist (50W @ $1200 = $60,000); Landscape Conservation Nat Specialist (105W @ $400 = $42,000); Three Site Coordinators (PA Management and Capacity Building Specialists) (390W @ $260 = $101,400). Total: $215,898
13	Travel: International, regional and local travel costs for International Consultants for Outcome 2 activities: International PA & BD Strategy Advisor ($10,080); Landscape Conservation Int TA ($16,800); Sustainable Financing Int Specialist ($7,968). Travel for National Consultants: PA Capacity Development Nat Specialist ($10,080); Landscape Conservation National Technical Advisor ($26,880); Sustainable Financing National Specialist ($6,048); three Protected Area Management and Operational Specialists ($30,240); Community Participation National Specialist ($10,080); Gender and Community National Specialist ($8,064); 3 Education and Community National Specialists ($20,160); Biological Monitoring National Specialist ($20,160). Total: $222,720.
14A	Contractual Services - Company Inputs for Outputs 2.1-2.5: Provision of essential basic management infrastructure for the 4 demonstration PAs ($347,000). Includes Wardens offices, guard posts, meeting hall, etc. Present management facilities are inadequate at all sites and PA budget is insufficient to provide them. WCS has already financially supported the construction of various buildings at the project sites during baseline activities.
14B	Contracted Services for management operations at Hukaung Valley for Outputs 2.1-2.5: Staff allowances - $471,280; Operational Costs (fuel, vehicle and equipment maintenance, communications) - $179,000. Staff training: $40,000. Total: $690,280. Existing PA budgets are unable to support these costs.
14C	Contracted Services for management operations at Htamanthi WS for Outputs 2.1-2.5 : Staff allowances - $315,470, . Operational Costs (fuel, vehicle and equipment maintenance, communications) - $131,000. Staff training: $40,000. Total $486,470. Existing PA budgets are unable to support these costs.
14D	Contracted Services for management operations at Hponkanrazi WS and Hkakaborazi NP for Outputs 2.1-2.5 : Staff allowances - Hponkanrazi $198,125, Hkakaborazi $369,125. Operational Costs (fuel, vehicle and equipment maintenance, communications) - Hponkanrazi $52,000, Hkakaborazi $106,000. Staff training: $40,000. Total: $765,250. Existing PA budgets are unable to support these costs.

14E	Output 2.5: Subcontracted technical assistance for project M&E plan costs under Output 2.5 (see Table 6 of project document and section H of CEO Endorsement) including: Contracted services for Midterm and Terminal Evaluations including: International Project Evaluators , National Project Evaluators and associated travel for evaluators; annual audits; inception meeting costs; technical studies for measurement of MoV for project M&E (total $207,000) including operational cost.
14F	Contractual Services - Company Inputs for Output 2.4 in order to provide technical assistance for the development and initial implementation of the 5-year Law Enforcement Action Plan (LEAP) for Kachin State. This support will cover consultation processes for development of the LEAP, including meeting and travel costs, allowances for local / regional government staff, and the planning, design and delivery of targeted awareness materials to support LEAP implementation and threat reduction. Total $100,000.
15	Essential equipment for management of the 4 demonstration sites (for Outputs 2.1-2.5): Field equipment (includes cameras, binoculars, GPS, compass, UHF radios, camping equipment, clothing, etc) ($166,550); Office equipment (includes laptops, printers, projectors, screens, furniture, references, etc) ($52,150); 4x4 trucks 3 at $50,000 each = $150,000; Motorcycles ($10,000); motorboats ($11,700); generators ($6500); grass cutters ($600); weather stations ($7,500). Total: $405,000. The three 4x4 vehicles, motorcycles and motorboats are critical support for strengthened patrolling, enforcement, survey and community participation work in these extremely large, remote and inaccessible areas. Road infrastructure is basic where it exists. The current PA budget is insufficient to pay for full staffing complements let alone equipment and facilities for management.
16	Communications costs for Outcome 2 activities
17	Audio-visual and printing for technical reports, training materials, awareness materials, etc.
18	Miscellaneous costs: sundry costs, contingency for currency exchange fluctuations
Project Management Costs	
19	International Consultant Inputs: CTA (20W at $2000 with 3% annual increase $42,473)
20	Contractual Services - individual: Project Manager (43W at $1200 = $51,600); Landscape Coordinator (30W at $400 = $12,000); Central Accountant/Office Manager (130W at $148 = $19,240); Landscape Accountant/Office Manager (130W at $148 = $19,240); Site Book-keepers/ Administrators (3) (390W at $148 = $57,720). Total: $199,395
21	Travel associated with project management:
22	Office equipment for project management units in Naypyitaw and Myitkyina, including computers and software (4), laser printers (3), fax machines (2), photocopiers (2), IT accessories, software, office furniture, etc.
23	Communications costs for project management activities
24	Miscellaneous costs: sundry costs, contingency for currency exchange fluctuations

25	Estimated UNDP Direct Project Service/Cost recovery charges for procurement of three project vehicles at $500 each requested by WCS/ MOECAF to UNDP for executing services as indicated in the Management Arrangement and to be included in the Agreement in **Annex 13** of the Project Document. In accordance with GEF Council requirements, the costs of these services will be part of the executing entity's Project Management Cost allocation identified in the project budget DPS costs would be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost. The amounts here are estimations based on the services indicated, however as part of annual project operational planning the DPS to be requested during the calendar year would be defined and the amount included in the yearly project management budgets and would be charged based on actual services provided at the end of that year.

SECTION IV: ADDITIONAL INFORMATION

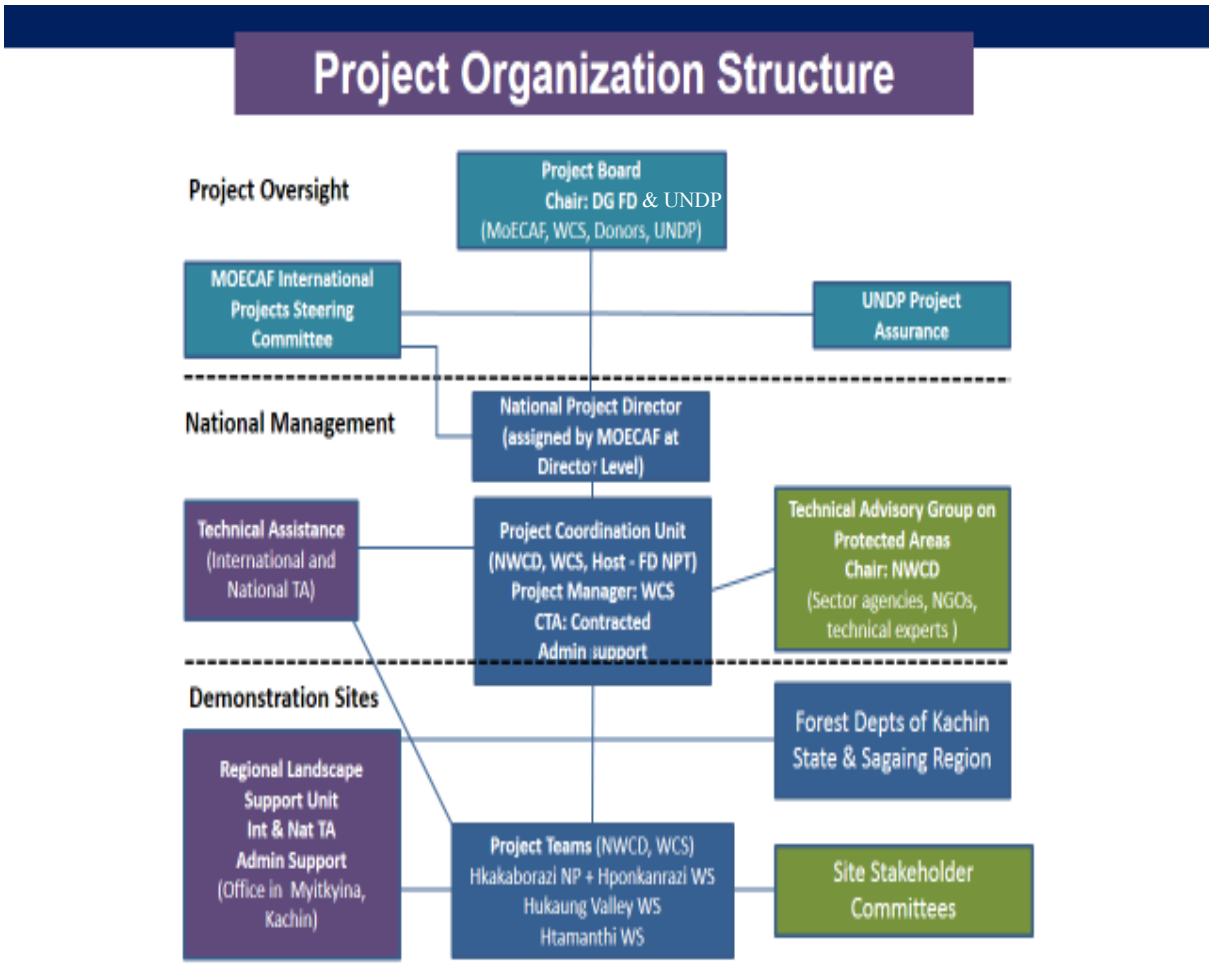
PART I: Other agreements

CO-FINANCING LETTERS

-- See separate file—

[filename]

PART II: Organogram of Project



PART III: Terms of Reference for key project staff

National Project Director (NPD)

Funding
The National Project Director (NPD) is a FD director who is financed through national government funds (co-financing).

Relationships
The NPD will be:
- Accountable to MOECAF and UNDP for the achievement of objectives and results in the assigned Project

Selection
- MOECAF will appoint the NPD, in consultation with UNDP and the CSO implementation partner

Role of the NPD
- Serve as a member of the Project Board
- Supervise compliance with objectives, activities, results, and all fundamental aspects of project execution as specified in the project document
- Supervise compliance of project implementation with MOECAF policies, procedures and ensure consistency with national plans and strategies
- Facilitate coordination with other organizations and institutions that will conduct related conservation activities for the Protected Area system or at the project sites
- Participate in project evaluation, testing, and monitoring missions
- Coordinate with national governmental representatives on legal and financial aspects of project activities
- Coordinate and supervise government staff inputs to project implementation
- Coordinate, oversee and report on government cofinancing inputs to project implementation

Project Manager

Overview
The Project Manager (PM), together with the CTA will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the National Project Director in close consultation with the UNDP CO for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project Board (PB). Generally, the PM will be responsible for meeting contractual obligations under the project, under the CSO execution modality. He/She will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and project partners, and maintain close collaboration with other donor agencies providing co-financing.

Duties and Responsibilities

1. Work with the CTA to supervise and coordinate the production of project outputs, as per the project document;
2. Mobilize all project inputs in accordance with UNDP procedures for NGO executed projects;
3. Together with the CTA, supervise and coordinate the work of all project staff, consultants and sub-contractors;
4. Coordinate the recruitment and selection of project personnel;
5. Prepare and revise project work and financial plans, as required by MOECAF, WCS and UNDP;
6. Liaise with UNDP, MOECAF, other relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
7. Facilitate administrative backstopping to subcontractors and training activities supported by the Project;
8. Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, MOECAF, WCS and other oversight agencies;
9. Disseminate project reports and respond to queries from concerned stakeholders;
10. Report progress of project to the Project Board, and ensure the fulfilment of Project Board directives.
11. Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally;
12. Ensures the timely and effective implementation of all components of the project;
13. Assist community groups, municipalities, NGOs, staff, students and others with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;
14. Encourage staff, partners and consultants such that strategic, intentional and demonstrable efforts are made to actively include women in the project, including activity design and planning, budgeting, staff and consultant hiring, subcontracting, purchasing, formal community governance and advocacy, outreach to social organizations, training, participation in meetings; and access to program benefits.
15. Coordinate and assist with the initiation and implementation of all field studies and monitoring components of the project
    - Develop a national SMART data depository for monitoring Law Enforcement and Patrolling across the PA network
    - Develop and actively participate in Technical Working Groups for capacity needs, policy and financing for protected areas
    - Participate as a trainer on protected area management topics as needed.
16. Coordinate and assists scientific institutions with the initiation and implementation of all field studies and monitoring components of the project
17. Assists and advises the teams responsible for national and demonstration site activities; and
18. Carry regular, announced and unannounced inspections of all sites and the activities of the project site management units.

Competencies

- Strong leadership, managerial and coordination skills, including ability to coordinate the implementation of large, complex projects;

- Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies;
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Technical and intellectual skills in conservation strategy and protected area management informed by international perspectives;
- Demonstrated ability to operate effectively in a highly complex organizational context;
- Ability to maintain high standards despite pressing deadlines;
- Excellent communication (both oral and written) skills, including drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Strong knowledge about Myanmar political and socio-economic context, in particular at National and regional levels;

Required Skills and Experience

- A university degree (MS or PhD) in Natural Resource Management or Environmental Sciences;
- At least 10 years of experience in natural resource and water management;
- At least 5 years of project/programme management experience;
- Working experience with ministries and national institutions (MOECAF) is a plus, but not a requirement;

Language:

- Excellent spoken and written communication skills in Burmese; and
- A good working knowledge of English is a requirement.

Chief Technical Advisor

Overview

The Chief Technical Advisor (CTA) will be responsible for ensuring strategic and technical quality and consistency of the project, by providing overall technical supervision, advice, guidance and support for strategic implementation to achieve the project's objectives. The CTA is also expected to facilitate adaptive management for innovation during the project implementation.

H/She will render technical advice and inputs to the National Project Director (NPD), Project Manager (PM), MOECAF and other government departments (such as local Forestry Department offices), and will provide technical oversight to Technical Advisors in the Regional Landscape Support Unit, international and national consultants and subcontractors to ensure a consistent approach at national, subnational and site levels. H/She will communicate with the UNDP Country Office in a timely manner regarding important issues arising during project implementation. H/She will lead on providing technical clearance for

reporting, monitoring & evaluation (Tracking Tools and Scorecards), and documentation required for the project's Mid-Term Review (MTR) and Terminal Evaluation (TE). H/She will also lead on preparing and reviewing Terms of Reference for contracted project inputs.

Duties and Responsibilities

The CTA will closely work with the PM and report to the NPD. H/she will perform technical tasks as follows:

1. Advise the MOECAF, Forest Department and subnational and local Forestry Department offices and other agencies on key strategic and policy issues related to biodiversity conservation strategy and protected area planning and management in support of the project, Myanmar NBSAP and national and local development plans;
2. Be responsible for quality assurance of biodiversity conservation analysis and related conservation and sustainable development studies, and draft synthetic reports and documents to support the decision making process;
3. Provide technical inputs for preparing ToRs and developing methodology in the execution of various technical studies to be carried out through the project, as well as assuring quality of technical reports compiled by consultants;
4. Ensure the technical quality of the project inception report, annual progress reports, Project Implementation Review (PIR), mid-term review self-assessment reports, and terminal evaluation self-assessment reports;
5. Provide technical support for coordination of the project, as well as measurement and documentation of project progress and impact;
6. Provide technical inputs to mid-term review and terminal evaluation exercises, especially clearance for Tracking Tools and Scorecards;
7. Support MOECAF/Forest Department and subnational government agencies in implementation of their strategic plans;
8. Produce policy briefing papers and project technical and periodic reports for advocacy and knowledge management as appropriate;
9. Ensure that sound conservation principles are adhered to during project intervention and be responsible for monitoring that intended biodiversity conservation outcomes of the project are attained;
10. Assist the MOECAF/Forest Department and subnational government agencies through related policy and strategy development processes, as well as any internal streamlining processes to ensure that adequate human and financial resources are properly budgeted for and included for effective biodiversity conservation outcomes and effective PA management;
11. Ensure that the MOECAF/Forest Department and subnational government agencies institute effective and sustainable biodiversity monitoring and evaluation mechanisms at both local and national levels, including support for PA management planning, PA performance monitoring, scientific database consolidation and knowledge management;
12. Facilitate and provide training courses to strengthen capacity in the biodiversity conservation assurance mandate of the MOECAF/Forest Department and subnational government agencies;
13. Act as a champion in important domestic and international events for promoting the project's impacts and policy advocacy, including interaction with media when delegated by NPD;
14. Contribute to the project's communications and outreach efforts, including inputs to information materials;

15. Assist in promoting inter-institutional cooperation within the conservation and related sectors around areas of mutual interest and concern;
16. Assist the PM in liaison work with project partners, donor organizations, NGOs and other groups to ensure effective coordination of project activities;
17. Document lessons from project implementation and make recommendations to the Project Board for more effective implementation and coordination of project activities;
18. Support the promotion of gender equity in the programme where possible, and;
19. Perform other duties relevant to the project and his/her expertise.

Key Indicators for the Consultant's Performance

1. Quality technical products (assessment reports, policy documents, issue papers, regular progress reports, speeches, advocacy materials) developed and produced through the project;
2. Sustainable biodiversity and law enforcement monitoring and evaluation mechanisms instituted;
3. Knowledge management system instituted with viable biodiversity and PA database and monitoring mechanisms;
4. High rating of quality of annual progress reporting and evaluation reports;
5. Attainment of the projects' targets in particular METT (Management Effectiveness Tracking Tool) score increase, policy and regulatory improvements, PA system expansion, institutional capacity improvement, sustainable financing scorecard improvement, reduction of threats to PAs, etc.

Competencies

- Strategic technical and intellectual skills in the substantive area with global dynamic perspectives;
- Leadership, innovation, facilitation, advocacy and coordination skills;
- Ability to manage technical teams and engage in long term strategic partnership;
- Entrepreneurial abilities and ability to work in an independent manner;
- Ability to work effectively in a team, with good relationship management skills ;
- Strong managerial and coordination skills, including ability to coordinate the development of large, complex projects;
- Demonstrated ability to operate effectively in a highly complex organizational context;
- Ability to maintain high standards despite pressing deadlines;
- Excellent communication (both oral and written) and partnership building skills with multi-dimension partners and people, skill for conflict resolution and negotiation;
- Excellent writing skills, especially in the preparation of official documents and reports;
- Good knowledge of Myanmar's environmental and socio-economic context.

Required Skills and Experience

Education:

- An advanced degree in conservation, natural resources management, environmental science or related fields, preferably in biodiversity conservation and management.

Experience:

- At least 15 years of professional experience in the field of ecosystems and biodiversity management, in particular experience working on ecosystem management, conservation and protected area management issues;
- Extensive experience with project development, implementation and management (experience in multilateral and government-funded conservation projects is preferable);
- Working experience with international organizations or having worked as a CTA or consultant is an advantage, preferably with knowledge of GEF, UNDP policies, procedures and practices;
- Experience in working in the relevant fields in Myanmar and with its government, experiences working in international organizations in Myanmar or abroad is a strong asset;

Language:

- Fluency in written and spoken English is required; good knowledge of Burmese is an asset.

OVERVIEW OF INPUTS FROM TECHNICAL ASSISTANCE CONSULTANTS

Table 9. Overview of Inputs from Technical Assistance Consultants

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management / Monitoring & Evaluation		
Local / National contracting		
Project Manager Rate: $1,200/week	43 weeks / over 5 years	The Project Manager (PM), together with the CTA will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. See the full TOR above for details.
Landscape Coordinator Rate: $400/week	30 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Landscape Coordinator (LC) will manage the day-to-day implementation of the project activities at the project sites and surrounding landscapes and coordinate monitoring and evaluation of project activities. Specifically,the LC will: • Provide strategic guidance and operational support on conservation planning and LEM for the NFC in collaboration with the CTA and PM • Coordinate to maintain relationship and engagement with important stakeholders such as regional government, ministries, line departments, civil society organizations, universities, LNGOs, INGOs and donors for long-term conservation in the NFC. • Coordinate with the CTA and PM regarding Capacity Building activities for staff of Forest Department. • Provide guidance to the PA Management and Operations Specialists for site activities including conservation and biological monitoring, conservation education and community based natural resource management. • Support the CTA and PM in developing donor reports and technical reports for line government departments.
International / Regional and global contracting		

Consultant	Time Input	Tasks, Inputs and Outputs
Chief Technical Advisor Rate: $2,000/week	20 weeks / over 5 years	The Chief Technical Adviser (CTA) will be responsible for providing overall technical backstopping and management support to the Project. See the full TOR above for details.
For Technical Assistance		
Outcome 1		
Local / National contracting		
Protected Area Capacity Development National Specialist Rate: $300/week	80 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Protected Area Capacity Development Specialist (PACDS) will work closely with the Protected Area Capacity Development Advisor (PACDA) to conduct protected area capacity building related to the project under Outputs 1.2 and 1.3 and support a working group for improved protected area capacity building and work with that group to: • Contribute to the development of a capacity development strategy and action plan for increasing the management effectiveness of the PA system. • Coordinate the establishment of PA management standards and a PA and individual performance monitoring system for different categories of PAs. • Contribute to the development of a program of training to raise focal competencies of senior and mid-level protected area managers and practioners. • Contribute to the indentification of incentive mechanisms for increasing the motivation of field staff. • Contribute to the development and institutionalisation of modernized reporting structure and methods. • Contribute to the development of law enforcement and habitat/biodiversity monitoring protocols. • Coordinate the development and institutionalisation of a PA information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities. • Coordinate the development of official guidelines for community engagement and co-management.
National Legal and Policy Analysis Specialist Rate: $300/week	60 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Legal and Policy Analysis Specialist (LPAS) will work closely with the international Legal and Policy Analysis Advisor (LPAA) to coordinate the creation of a working group for improved protected area laws and policies under Output 1.1 and work with that group to: • Contribute to the development of enabling policy that ensures PAs have clear access to funds raised through sustainable financing mechanisms and develop policies that consider development of site business plans, integrated reporting across multi-year plans, promoting legal recognition of protected area management plans, and inclusion of stakeholder participation in site activities with proactive attention towards gender and minority involvement. • Contribute to the development of policies that integrate the valuation of ecosystem services with national level land-use planning; • Work to clarify the legal status of PA buffer zones and rationalization of approaches toward them (some are inside and some outside PA boundaries);

Consultant	Time Input	Tasks, Inputs and Outputs
		• Work to clarify the governance arrangements for coastal PAs (including a stakeholder meeting); and • Contribute to the development of enabling legislation that would allow local people to use and benefit from sites within Protected Areas.
Sustainable Finance Specialist Rate: $300/week	50 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Sustainable Financing Specialist (SFS) will work closely with the international Sustainable FinancingAdvisor (SFA) to coordinate the creation of a working group for sustained financing for protected areas under Output 1.4 and work with that group to: • Coordinate the initiation of a participatory process for developing a sustainable financing strategy, with an expert working group facilitated and guided by international and national sustainable financing specialists. • Contribute to building understanding, capacity and collaboration through the process of developing the strategy. Including increasing awareness of innovative financing models and the need to increase benefit-sharing for communities, develop analytical skills on this topic and build capacity to engage a diverse array of possible financing partners, including the private sector. • Contribute to building increased collaboration with and understanding by key ministries. • Coordinate and contribute to key studies to inform this process, including: o An assessment of the resources needed to finance the whole expanded PA system. o An assessment of the intersection between planned hydropower developments and protection of upstream watersheds by protected areas, in order to develop a business case for hydropower companies to pay for watershed protection. o An assessment of the potential for tourism in Myanmar's protected areas, including high-end tourism and development of tourism concessions (e.g. for eco-lodges). o An assessment of the forest carbon values of Myanmar's protected area network. o Assessment of the government budget system, including cash transfer procedures and audits, in order to assess the potential to scale-up government finance and to provide direct budget support to MOECAF for PA management. • Work closely with other project components especially the Legal and Policy Analysis Advisor and Specialist to ensure synergy and minimize overlap.
Biological Monitoring National Specialist Rate: $300 / week	20 weeks / over 5 years	Under close supervision of the Chief Technical Advisor (CTA) and Project Manager (PM), and in coordination with the Protected Area Capacity Development Specialist (PACDS) andProtected Area Capacity Development Advisor (PACDA),the Biologist Monitoring National Specialist will provide technical inputs for the development and implementation of the training programmes for protected area capacity building under Output 1.3. This will include: • Development of training materials on biological monitoring for inclusion in training programmes at different levels • Providing input on biological monitoring to delivery of pilot training programmes

Consultant	Time Input	Tasks, Inputs and Outputs
		• Review and revision of training curricula and materials on biological monitoring
International / Regional and global contracting		
International PA & Biodiversity Strategy Advisor Rate: $ 2,000/week	25 weeks / over 5 years	In close coordination with the Project Manager (PM), the international Protected Areas and Biodiversity Advisor (PABA) will provide international perspective, strategic guidance and technical inputs to the implementation of activities under Outputs 1.1 to 1.6, including the following: • For Output 1.1, the PABA will coordinate and provide technical advice to the international and national policy specialists, participate in the policy review process and provide inputs to policy recommendations for strengthening the national PA system • For Output 1.2, the PABA will coordinate and provide technical advice to the international and national capacity building specialists regarding the capacity development strategy and action plan for increasing the management effectiveness of the PA system; development of PA management standards and performance monitoring system; the development and institutionalisation of a modernized PA reporting system; the development of law enforcement and habitat/biodiversity monitoring protocols; and the development and institutionalisation of a PA information and knowledge management system • For Output 1.3, the PABA will provide technical advice to the international and national capacity building specialists, and provide guidance and inputs to the development and delivery of a program of training to raise focal competencies of senior and mid-level protected area managers and practitioners. • For Output 1.4, the PABA will coordinate and provide technical advice to the international and national sustainable financing experts regardingdevelopment of a sustainable financing strategy for the PA system, capacity building for implementation of the strategy, the development of a series of studies to inform sustainable financing policies and plans, and integrating PA system concerns into REDD+ programme development. • For Output 1.5, the PABA will coordinate and provide technical advice to the international and national landscape conservation regarding awareness and knowledge building for State, Region and local government units in Kachin State and Sagaing Region on the value of PAs; and implementation of a social marketing campaign linked to cofinanced WCS national communications strategy work. • For Output 1.6, the PABA will provide technical advice and support to the national PABS, NWCD and other stakeholders for implementation of PA gap analysis recommendations; coordinate plans for biological and social ground-truthing surveys for areas of conservation value; and facilitate a cooperative process to identify potential areas for PA creation.
Landscape Conservation	100 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) and in coordination with the Landscape Conservation

Consultant	Time Input	Tasks, Inputs and Outputs
Advisor Rate: $1,200/week		National Specialist, the international Landscape Conservation Advisor (LCA) will provide technical advice and assistance for the implementation of Output 1.5, including: • Awareness and knowledge building for State, Region and local government units in Kachin State and Sagaing Region, on the value of PAs in terms of ESand other potential income sources for local communities, drawing on the economic studies in Output 1.4 and demonstration activities in Component 2. • Technical assistance in support of sub-regional planning through the landscape coordination unit based in Myitkina who will work with the relevant forestry offices. • Design and implementation of a social marketing campaign (linked to cofinanced WCS national communications strategy work), providing communication products based on valuation and sustainable financing studies for key audiences associated with the protected areas
Legal and Policy Analysis Advisor Rate: $1,600/week	18 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the international Legal and Policy Analysis Advisor (LPAA) will provide technical guidance on protected area legal and policy issues under Output 1.1 of the project and work closely with the Legal and Policy Analysis Specialist (LPAS) to advise on the creation of a working group for improved protected area laws and policies and work with that group to: • Enable policy that ensures PAs have clear access to funds raised through sustainable financing mechanisms and develp policies that consider development of site business plans, integrated reporting across multi-year plans, promoting legal recognition of protected area management plans, and inclusion of stakeholder participation in site activities with proactive attention towards gender and minority involvement. • Develop policies that integrate the valuation of ecosystem services with national level land-use planning; • Clarify the legal status of PA buffer zones and rationalization of approaches toward them (some are inside and some outside PA boundaries); • Clarify the governance arrangements for coastal PAs (including a stakeholder meeting); and • Develop enabling legislation that would allow local people to use and benefit from sites within Protected Areas.
Protected Area Capacity Development Advisor Rate: $1,400/week	18 weeks / over 3 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the international Protected Area Capacity Development Advisor (PACDA) will provide technical guidance on protected area capacity building issues under Outputs 1.2 and 1.3 of the project and work closely with the Protected Area Capacity Development Specialist (PACDS) to advise on the creation of a working group for improved protected area capacity building and work with that group to: • Develop a capacity development strategy and action plan for increasing the management effectiveness of the PA system. • Establish PA management standards and PA and individual performance monitoring system for different categories of PAs. • Develop a program of training to raise focal competencises of senior and mid-level protected area managers and practioners. • Identify incentive mechanisms for increasing the motivation of field

Consultant	Time Input	Tasks, Inputs and Outputs
		staff. • Develop and institutionalise modernized reporting structure and methods. • Establish law enforcement and habitat/biodiversity monitoring protocols. • Establish and institutionalise a PA information and knowledge management system enabling learning from, and upscaling of, pilot/individual project activities. • Develop official guidelines for community engagement and co-management.
Sustainable Financing Advisor Rate: $1,600/week	9 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Sustainable Financing Advisor (SFA) will provide technical guidance on sustainable financing for protected areas under Output 1.4 and work closely with the Sustainable Finance Specialist (SFS) to advise on the creation of a working group for sustained financing for protected areas and work with that group to: • Initiate a participatory process for developing a sustainable financing strategy, with an expert working group facilitated and guided by international and national sustainable financing specialists. • Build understanding, capacity and collaboration through the process of developing the strategy. Including increase awareness of innovative financing models and the need to increase benefit-sharing for communities, develop analytical skills on this topic and build capacity to engage a diverse array of possible financing partners, including the private sector. • Build increased collaboration with and understanding by key ministries. • Oversee and participate in key studies to inform the process, including: o An assessment of the resources needed to finance the whole expanded PA system. o An assessment of the intersection between planned hydropower developments and protection of upstream watersheds by protected areas, in order to develop a business case for hydropower companies to pay for watershed protection. o An assessment of the potential for tourism in Myanmar's protected areas, including high-end tourism and development of tourism concessions (e.g. for eco-lodges). o An assessment of the forest carbon values of Myanmar's protected area network. o Assessment of the government budget system, including cash transfer procedures and audits, in order to assess the potential to scale-up government finance and to provide direct budget support to MOECAF for PA management. • Work closely with other project components especially the Legal and Policy Analysis Advisor and Specialist to ensure synergy and minimize overlap.
Director Regional Conservation Hub Rate: $3,923/week	2.5 weeks / over 5 years	In close coordination with Chief Technical Advisor (CTA) and Project Manager (PM), the Director Regional Conservation Hub will provide WCS regional management and technical supports to ensure effectiveness of outputs of outcome1.
Outcome 2		
Local / National contracting		

Consultant	Time Input	Tasks, Inputs and Outputs
Protected Area Capacity Development National Specialist Rate: $300/week	50 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Protected Area Capacity Development Specialist(PACDS) will work closely with the Protected Area Capacity Development Advisor (PACDA) to conduct protected area capacity building work for the project sites under Outputs 2.2 and 2.5, linked to capacity building plans and programmes developed under Outputs 1.2 and 1.3. This will include: • Coordinate training inputs to improve knowledge and skills of PA staff and local partners to manage specific threats to the PAs (Output 2.2); • Facilitate the expansion existing models for PA management effectiveness from advanced PAs (such as Hukaung Valley WS) to those with few to no current activities within the target landscape (Output 2.5) • Facilitate the development of new models for PA management effectiveness based on the existing activities at more advanced PAs to increase capacity and inform policy and land use decisions (Output 2.5) • Promote sustainability and the expansion of best practices pilot management activities by incorporating them into central level learning networks and gradually expanding them to PAs nationwide (Output 2.5) • Facilitate the piloting of incentive mechanisms for increasing the motivation of field staff.(Output 2.5) • Facilitate the piloting of modernized reporting structure and methods at project sites.(Output 2.5)
Sustainable Finance Specialist Rate: $300/week	20 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Sustainable Financing Specialist (SFS) will work closely with the international Sustainable Finance Advisor (SFA), Landscape conservation experts and PA management and operational specialists at the sites to provide technical guidance and assistance for the development of business plans and sustainable financing options for the four demonstration sites under Output 2.1: • Facilitate a small team tasked with developing the business plan at each site, including the PA Manager (warden), Financial Officer, government agency representatives (FD, NWCD), and other project experts as needed. • Develop management needs-based park business plans for the four target PAs, identifying PA management costs and defining non-state appropriated revenue options and mobilizing market opportunities. • Identify, assess and where feasible, implement revenue generation opportunities in the four demonstration PAs, taking account of the economic valuation and sustainable financing studies conducted under Output 1.4 andconsidering possible REDD+, ecotourism, wildlife friendly products, NTFPs or other income generation opportunities based on the local context. • Lead the detailed design of the sustainable financing mechanism to be demonstrated at each demonstration PA based on the results of the mentioned studies in Output 1.4, and in line with STAP guidance documents.
Community Participation	130 weeks over 5 years	Under the oversight of the Chief Technical Advisor (CTA) and Project Manager (PM) and direct supervision and assistance of the Landscape Coordinator, the Community Participation National Specialist will work

Consultant	Time Input	Tasks, Inputs and Outputs
National Specialist Rate: $300/week		closely with the PA Management and Operations Specialists, Gender and community specialist, Education & Community National Specialists and sustainable financing experts to lead implementation of activities under Output 2.3. This will include operationalizing a community participation strategy incorporating minority and gender considerations (see **Annex 10**) that would be used to develop and implement pilot systems for community participation in PA management at the four demonstration sites. Specific items include: • Developing sustainable mechanisms for the participation of local stakeholders, especially local communities, in PA management processes, including site stakeholder committees for each of the demonstration PAs to inform, advise and coordinate activities; • Coordinating training and education on climate change adaptation and the incorporation of community-based adaptation in community participation strategies • Coordinate development of community based resource management plans and linkages to other projects. • Address local threatsby designing community involvement processes that target communities in the concerned areas, including awareness programmes, development of alternative livelihoods and measures such as conservation agreements that provide incentives to reward improved management practices. Conduct evaluation of the incentive schemes for adaptive management, including collection of data on community livelihoods to monitor the impact of the project on local people.
Gender & community specialist Rate: $480 / week	24 weeks over 5 years	Under the oversight of the Chief Technical Advisor (CTA) and Project Manager (PM) and direct supervision and assistance of the Landscape Coordinator, the Gender and Community Specialist will work closely with the Community Participation National Specialist, PA Management and Operations Specialists, Education & Community National Specialists to integrate gender and minority concerns into the implementation of project activities at the demonstration sites under Outputs 2.1, 2.2, 2.3 and 2.5. Specific items include: • Reviewing and ensuring that the project's community participation strategy (see **Annex 10**) adequately incorporates minority and gender considerations • Providing input to the design of project plans and activities to ensure that safeguards in line with the project's ESSP (see **Annex 11**) are incorporated and complied with. • Conducting period reviews of project activities at the demonstration sites to evaluate their consistency with UNDP/GEF gender and minority participation guidelines and to recommend improvements as appropriate • Reporting on gender and minority involvement in PA management processes, including site stakeholder committees for each of the demonstration PAs and identification and sharing of best practices and lessons learned • Providing training, capacity building, talks, etc. on gender and minority participation for relevant audiences
Education & Community National Specialists (3)	390 weeks over 5 years	Under the oversight of the Chief Technical Advisor (CTA) and Project Manager (PM) and direct supervision and assistance of the Landscape Coordinator, the Education & Community National Specialists (one for each site, with Hkakaborazi and Hponkanrazi combined) will work closely

Consultant	Time Input	Tasks, Inputs and Outputs
Rate: $120 / week		with the PA Management and Operations Specialists, Gender and community specialist, Community Participation National Specialist and sustainable financing experts to lead implementation of activities under Outputs 2.2, 2.3 and 2.5 at the sites. Specific items include: Supporting the implementation of the project's community participation strategy incorporating minority and gender considerations (see **Annex 10**) that would be used to develop and implement pilot systems for community participation in PA management at the four demonstration sites. • Facilitating participatory processes for local stakeholders, especially local communities, in PA management, including site stakeholder committees for each of the demonstration PAs to inform, advise and coordinate activities; • Developing and implementing community level education and awareness programmes, regarding the biodiversity and socio-economic values of PAs, key issues concerning PAs, sustainable livelihood options, etc. • Facilitating training and education on climate change adaptation; • Facilitating the development and implementation of community based resource management plans and linkages to other projects; • Implementing community involvement processes that aim to address specific threats through targeting communities in the concerned areas, including awareness programmes, development of alternative livelihoods and measures such as conservation agreements that provide incentives to reward improved management practices. • Collecting data on community livelihoods to monitor the impact of the project on local people.
Biological Monitoring National Specialist Rate: $300 / week	110 weeks / over 5 years	Under close supervision of the Chief Technical Advisor (CTA) and Project Manager (PM), and in coordination with the Protected Area Capacity Development Specialist (PACDS) and Protected Area Capacity Development Advisor (PACDA), the Biologist Monitoring National Specialist will provide technical advice and inputs for the biological monitoring activities at the project sites under Outputs 2.2, 2.4 and especially Output 2.5. This will include: • Development and piloting of a monitoring and evaluation system for the demonstration PAs thatwill form the basis for a PA system M&E system for NWCD. It will include a full range of ecological, socio-economic (including gender) and financial indicators. • Provide capacity building for the staff of the demonstration PAs to undertake field surveys, monitoring and evaluation of key biodiversity features, in order to develop an adequate inventory of the conservation values of each PA (habitats, species, landscape features). • Support capacity building for participatory monitoring involving local stakeholders. • Develop a system for monitoring ecosystem functions and socio-economic conditions in community managed areas in order to provide relevant scientifically-based information on the state of ecosystems and livelihoods in relation to sustainable use (includingthe role of ecosystems for climate change adaptation, mitigation, the condition of endangered species, and the value of ecosystem services for women and general community

Consultant	Time Input	Tasks, Inputs and Outputs
		wellbeing). • Provide training in data collection and analysis techniques to ensure that subnational and site staff and stakeholders understand the results of the monitoring program and the implications of these results for project activities. • Provide input to Output 2.4 in order to analyse patterns and distribution of illegal wildlife and timber trade in and around the target protected areas in Kachin State • Support the implementation of Output 2.2 regarding strengthening of enforcement through design and piloting of the SMART patrolling and law enforcement monitoring system for all four demonstration PAs, including systematic use of SMART for collecting data on key species in each PA as part of the project's indicator system.
International / Regional and global contracting		
PA & Biodiversity Strategy Advisor Rate: $2,000/week	25 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and in coordination with the Project Manager (PM) and the Protected Areas and Biodiversity Strategy National Specialist, the Protected Areas and Biodiversity Strategy Advisor (PABSA) will provide strategic guidance to the international and national Landscape Conservation experts for Outcome 2 activities, with technical input to the implementation of activities under Output 2.2, including: • Strengthening of enforcement through piloting of the SMART patrolling and law enforcement monitoring system for all four demonstration PAs, and introduction of Adaptive Patrol Management (APM), linking to the reporting process associated with site management plan implementation. • Staff training to improve knowledge and skills of PA staff and local partners to manage specific threats to the PAs.
International Landscape Conservation Advisor Rate: $1,200/week	100 weeks / over 5 years	Under the close supervision of Chief Technical Advisor (CTA) and Project Manager (PM), and in collaboration with the LCNS, the LCA will provide technical advice and assistance for the overall implementation of Outcome 2 (Outputs 2.1 to 2.5 inclusive), including: • Capacity Building Activities (such as SMART training, GIS training, using GPS and Camera-trap etc.) for staff of the Forest Department (Output 2.2) • Technical guidance to PA Management and Operations Specialists for site conservation and biological monitoring activities (Outputs 2.2 and 2.5) • Technical guidance to PA Management and Operations Specialists for implementing conservation education activities at the project sites (Outputs 2.2, 2.3 and 2.4) • Technical guidance to PA Management and Operations Specialists for implementing community based natural resource management activities at the project sites (Output 2.3) • Technical guidance for developing the national and regional level law enforcement monitoring system applying the SMART patrol database (Outputs 2.2, 2.4 and 2.5)\ Technical inputs towards developing and revising the long-term strategic conservation planning for the NFC (Outputs 2.1, 2.2, 2.4)

Consultant	Time Input	Tasks, Inputs and Outputs
Sustainable Financing Advisor Rate: $1,600/week	9 weeks / over 5 years	Under close supervision of Chief Technical Advisor (CTA) and Project Manager (PM) the Sustainable Financing Advisor (SFA) will provide technical guidance on sustainable financing for protected areas and work closely with the Sustainable Finance Specialist (SFS), Landscape conservation experts and PA management and operational specialists at the sites to provide technical guidance and assistance for the development of business plans and sustainable financing options for the four demonstration sites under Output 2.1: • Provide technical guidance and assistance to small teams tasked with developing the business plan at each site, including the PA Manager (warden), Financial Officer, government agency representatives (FD, NWCD), and other project experts as needed. • Provide technical guidance and assistance for the development of management needs-based park business plans for the four target PAs, identifying PA management costs and defining non-state appropriated revenue options and mobilising market opportunities. • Identify, assess and where feasible,support the implementation of revenue generation opportunities in the four demonstration PAs, taking account of the economic valuation and sustainable financing studies conducted under Output 1.4 andconsidering possible REDD+, ecotourism, wildlife friendly products, NTFPs or other income generation opportunities based on the local context. • Provide technical guidance for the detailed design of the sustainable financing mechanism to be demonstrated at each demonstration PA based on the results of the mentioned studies in Output 1.4, and in line with STAP guidance documents. • Work closely with other project components especially the Legal and Policy Analyis Advisor and Specialist to ensure synergy and minimize overlap.
Director Regional Conservation Hub Rate: $3,923/week	2.5 weeks / over 5 years	• In close coordination with Chief Technical Advisor (CTA) and Project Manager (PM), the Director Regional Conservation Hub will provide WCS regional management and technical supports to ensure effectiveness of outputs of outcome2.

Note: 3% annual increase have been included in the budget table, for all the technical consultants' fees under outcome 1 and outcome 2, as well as the Chief Technical Adviser's fee. This is indicated in the budget note.

PART IV: Stakeholder Involvement Plan

Information dissemination and consultation during the PPG

266. Project design was a participatory process, in line with UNDP's and GEF's requirements. The PPG phase included consultations with the project's key stakeholders at the national, subnational and local levels, including national level consultation meetings in January 2013 and March 2014. Stakeholder workshops were convened as follows for the demonstration sites (see **Annex7**):

a. For Htamanthi WS, the workshop was conducted on 11th September 2013 at the Homalin Town Sport Hall, Homalin. There were 61 participants from relevant District and Township level government departments, NGOs, representatives from villages in

and around Htamanthi Wildlife Sanctuary. The Member of Parliament from Homalin Township and the Minister for Shan Ethic Affairs from Sagaing Regional Government participated in the opening ceremony.

b. For Hkakaborazi NP and Hponkanrazi WS, the workshop was conducted on 18th September 2013 at the Environmental Education Center in the head office of Hkakaborazi National Park, Putao Township, Putao District, Kachin State. There were totally 64 participants from relevant District and Township level government department, NGOs, representatives from villages in and around Hkakaborazi National Park. The Chairman of Putao District participated in the opening ceremony.
c. For Hukaung Valley WS, the workshop was conducted on 26th September 2013 at the Hukaung Town Hall, Tanai. There were 73 participants from heads and deputy heads from relevant Township level government departments from Tanai, Shinbweyan and Moegaung Townships, representatives from plantation companies and villages in and around Hukaung Valley WS. The Township Administrator of Tanai Township participated in the opening ceremony.

Approach to stakeholder participation

The project's approach to stakeholder involvement and participation is premised on the principles outlined in **Table 10** below.

Table 10: Stakeholder participation principles

Principle	Stakeholder participation will:
Value Adding	Be an essential means of adding value to the project
Inclusivity	Include all relevant stakeholders
Accessibility	Be accessible and promote involvement in decision-making process
Transparency	Be based on transparency and fair access to information; main provisions of the project's plans and results will be published in local mass-media
Fairness	Ensure that all stakeholders are treated with respect in a fair and unbiased way
Accountability	Be based on a commitment to accountability by all stakeholders
Constructive	Seek to manage conflict positively and to promote the public interest
Redress	Seek to redress inequity and injustice
Capacity building	Seek to develop the capacity of all stakeholders
Needs Based	Be based on the perceived and real needs of all stakeholders
Flexible	Be flexibly designed and implemented
Rational and Coordinated	Be rationally planned and coordinated, and not on an *ad hoc* basis
Excellence	Be subject to on-going reflection and improvement

267. The project will focus stakeholder engagement at the following levels of intervention: (i) working with national, provincial and local public institutions and agencies in order to strengthen their capacity to consolidate, expand and effectively manage the PA System and to align project activities with the government's strategic priorities; (ii) engaging with sub-national government agencies responsible for land use and development planning for the landscapes and wider regions encompassing the demonstration PAs; and (iii) working directly with PA staff, civil society organisations, formal and informal resource users (rights holders), private landowners and individuals to strengthen collaborative relationships for participatory PA management at the demonstration sites, mitigate impacts of sectoral practices, and optimise the socio-economic benefits arising from project activities.

Stakeholder involvement plan

268. During the project preparation stage, a preliminary stakeholder analysis was undertaken in order to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in project implementation. This included the collection of baseline socio-economic information on communities, land uses and threatsfor each of the demonstration PAs, informing local stakeholders about the project's planned activities and confirming their interest to participate in the project (see **Annex 7**). A full Stakeholder Involvement Plan remains to be prepared upon project inception. **Table 3** in the Stakeholder Analysis section of the Situation Analysisdescribes the major categories of stakeholders identified, and their roles envisaged in the project.

269. The project proposes a mechanism to achieve broad-based stakeholder involvement in the project preparation and implementation processes. Stakeholder participation will include the following components (see **Table 11**):

- Project Board (PB)
- TechnicalAdvisoryGroup on Protected Areas (TAGPA)
- Stakeholder Committees at site level

Table 11. Suggested members of PB, PPCC and Local Stakeholder Committees:

Project Board (PB)	**Technical Advisory Group on Protected Areas**	**Stakeholder Committees (for demonstration PAs)**
Chair:Director General of the Forest Department; Ministry of National Planning and Economic Development; Ministry of Finance; Kachin State and Sagaing Division Governments (General Administration Departments / Forest Departments); UNDP; and Wildlife Conservation Society. Other organizations may be added as necessary and agreed by the project executing partners. Director of NWCD will serve as secretary for the PB.	Representatives from MOECAF (including FD), other relevant government agencies, research and educational organizations, NGOs (including WCS), technical experts and other relevant stakeholders to be agreed by the PB. Technical experts may be invited in to discuss specific issues.	Local Government (District and Township); Project contracted staff; Local community leaders; Private sector organizations and businesses; Invited experts as needed.

Long-term stakeholder participation

270. The project will provide the following opportunities for long-term participation of all stakeholders, with a special emphasis on the active participation of local communities, and enhancement of inter-sectoral coordination for the PA system as part of sustainable development processes:

271. Decision-making – through the establishment of the Project Board. The establishment of the structure will follow a participatory and transparent process involving the confirmation

of all key project stakeholders; conducting one-to-one consultations with all stakeholders; development of Terms of Reference and ground-rules; inception meeting to agree on the constitution of the PB.

272. Capacity building – at systemic, institutional and individual levels – is one of the key strategic interventions of the project and will target all stakeholders that have the potential to be involved in brokering, implementing and/or monitoring management agreements related to activities in and around the PAs. The project will target especially organizations operating at the community level to enable them to actively participate in developing and implementing management agreements. Women and indigenous / ethnic minority groups will be proactively considered for capacity building activities based on specific needs assessments.

273. Communication - will include the participatory development of an integrated communication strategy. The communication strategy will be based on the following key principles:

- providing information to all stakeholders;
- promoting dialogue between all stakeholders;
- promoting access to information.

274. The project's design incorporates several features to ensure on-going and effective stakeholder participation in the project's implementation. The mechanisms to facilitate involvement and active participation of different stakeholder in project implementation will comprise a number of different components:

i) Project inception workshop

273. The project will be launched by a multi-stakeholder workshop. This workshop will provide an opportunity to provide all stakeholders with the most updated information on the project, refine and confirm the work plan, and will establish a basis for further consultation as the project's implementation commences.

ii) Constitution of the Project Board (PB)

275. The PB will be constituted to ensure consistent representation of the key stakeholders throughout the project's implementation. The representation, and broad terms of reference, of the PB are described in the **Management Arrangements in Part III** of the Project Document.

iii) Establishment of the Project Coordination Unit (PCU)

276. WCS will take direct operational responsibility for facilitating stakeholder involvement and ensuring increased local ownership of the project and its results. The PCU will be locatedin the NWCD and new WCS office in Naypyitaw, with a landscape conservation support unit in Myitkina (Kachin State)supporting site offices in PutaO, Tanai and Homalin to ensure coordination among key stakeholder organizations at the sub-national and local levels during the project period.

iv) Establishment of local working groups

277. At the activity level, local or specialist working groups (e.g., legal and policy review team, capacity development team, sustainable financing team, database and monitoring team, PA system strategy and action plan development team, community involvement team) will be established as required, to facilitate the active participation of affected institutions, organisations and individuals in the implementation of the respective project activities.

Different stakeholder groups may take the lead in each of the working groups, depending on their respective mandates. There will be equitable representation of women and ethnic minorities on site stakeholder committees and groups related to community co-management, alternative livelihoods and awareness activities.

v) Project communications

278. The project will develop, implement and annually update a communications strategy to ensure that all stakeholders are informed on an on-going basis about: the project's objectives; the project's activities; overall project progress; and the opportunities for stakeholders' involvement in various aspects of the project's implementation.

vi) Implementation arrangements

A number of project activities have specifically been designed to directly involve local stakeholders in the implementation of, and benefit from, these activities. These include: the creation or development of new opportunities for sustainable livelihood options and natural resource uses for local communities, stemming from feasibility assessment studies and co-management models. Women and indigenous / minority groups will be proactively considered for participation in sustainable livelihood activities based on these assessments. The principle of free prior and informed consent (FPIC) will be applied to the establishment of any conservation management agreements established with local communities, in line with the project's approach to environmental and social risk management (see ESSP in **Annex 11**).

vii) Formalizing cooperative governance structures

279. The project will actively seek to formalize cooperative governance structures at the level of PAs or their sub-units, to ensure on-going participation of local stakeholders in the planning and management of selected demonstration PAs.

viii) Capacity building

280. All project activities are strategically focused on building capacity – at systemic, institutional and individual levels – of the key stakeholder groups to ensure sustainability of initial project investments. The project will also seek to raise public awareness of the value and importance of the ecosystem services and biodiversity secured through effective habitat conservation and rehabilitation.

Coordination with related initiatives

281. UNDP will ensure close collaboration and synergetic impact with a number of UNDP-led initiatives in the country, especially those offering opportunities to cofinance community livelihood development, climate change adaptation and poverty alleviation. The project will be fully integrated in the UNDP's Country Programme in particular with the environment Programme and the community development and livelihood Programme, to make sure that the project and Programmes are mutually supportive. The project will work closely with UN-REDD Programme and its partners in strengthening the links between the national PA network, sustainable landscape management and REDD+ community-based activities, and will also explore increasing sustainable financing opportunities through the REDD+ mechanism.

282. Linkages and synergies will be sought through coordination with the GEF projects listed in **Table 12** below.

Table 12. Coordination and collaboration with Related GEF Financed Initiatives

GEF Financed Initiatives / Interventions	How collaboration with the project will be ensured
FAO/GEF Sustainable cropland and forest management in priority agro-ecosystems of Myanmar (#5123) Approved April 2013	Improved institutional, policy and regulatory framework for SFM and improved cropland management, as well as improved practice on the ground to be established by the FAO/GEF supported project will have direct positive impact on this project. Implementation of the two projects in the same time frame would allow an integrated approach for land-use based climate change mitigation and adaptation. The Ministry of Agriculture and Irrigation and MOECAF (Environmental Conservation Dept) are executing agencies, therefore MOECAF's Steering Committee for International Projects would provide a mechanism for information sharing and coordination. Cross-representation on the Project Boards/Steering Committees for the two projects would provide more specific opportunity for coordination.
ADB/GEF GMS-FBP Greater Mekong Subregion Forests and Biodiversity Programme (#4649) Approved Nov 2009	This programme aims to increase investments and improve the management and climate resilience climate resilience of high priority forest biodiversity conservation landscapes including protected area systems of the Greater Mekong Subregion (GMS), recognizing the pressures on these landscapes from development and climate change. No on-the-ground activities or investments are planned in Myanmar. Myanmar will however be invited to travel to other countries in the region through the regional support project to participate in regional assessments, data sharing, planning, capacity development and knowledge sharing activities.Coordination with this initiative will occur through MOECAF/NWCD, as it has strategic importance for strengthening the PA network through a biodiversity corridor in the south of the country.
UNEP/GEF Building Capacity for Regionally Harmonized National Processes for Implementing CBD Provisions on Access to Genetic Resources and Sharing of Benefits (#3853) Approved March 2011	Relevant to legal and policy issues in terms of regulating access to genetic resources in PAs, and providing benefits to communities. Has potential as a source of sustainable livelihoods for indigenous and local communities. This small national input to a regional Medium Sized Project is led by MOECAF's Environmental Conservation Division. Coordination regarding sustainable livelihoods for indigenous and local communities living in and around PAs is proposed through this project's output on policy and regulatory review.
UNEP/GEF Adapting Community Forestry Landscapes and	Executed by MOECAF/Environment Conservation Department (ECD), and Forest Department (FD), Ministry of Transport(MoT)/ Department of Meteorology and Hydrology (DMH). Aims to

GEF Financed Initiatives / Interventions	How collaboration with the project will be ensured
Associated Community Livelihoods to a Changing Climate, in Particular an Increase in the Frequency and Intensity of Extreme Weather Events (#5567) Approved Dec 2013	increase the resilience of Community Forestry and associated local community livelihoods to climate change-induced risks in the Central Dry Zone, Rakhine Coastal State and Ayeyarwaddy Region. While this project focuses on different demonstration areas, and is located primarily in production landscapes, its findings regarding community-based adaptation measures could be very applicable to community livelihood / adaptation activities at the project demonstration sites. The project will therefore seek to share information through MOECAF.

283. The project will also support the implementation of the MIKE Programme[79] and the timely submission of standardised relevant law enforcement data to CITES, as well as working with the WCS project for PA management support. Furthermore, the Project will coordinate with the Global Tiger Initiative[80], through directly contributing to the National Tiger Action Plan. The project will promote the objectives and recommendations of the National Tiger Recovery Plan and will work in both of Myanmar's designated Tiger Conservation Landscapes (TCLs).

284. The project will coordinate with other initiatives through NWCD and the project's TAGPA meetings, including programmes implemented by INGOs such as WWF and the Smithsonian Institute, and national NGOs such as BANCA and FREDA. Relevant work includes the following:

a. The Brahmaputra-Salween Landscape Conservation and Development Initiative (BSLCDI) is a collaborative effort of ICIMOD and the Governments of China, India, and Myanmar (Forest Dept). The aim is to engage local, national, and regional stakeholders in efforts toward improved management of this globally significant, biodiversity rich landscape.The Initiative will develop a framework for cooperation and common understanding on transboundary landscape issues which will provide a basis for an integrated and participatory approach for conservation, adaptation, and sustainable development, within the context of global climate change. The process will be based upon the development of an improved regional knowledge base, information and experience sharing, capacity building, and promotion of stakeholder consultation and community participation. Duration is May 2013 – December 2016.
b. EU Biodiversity and Climate Change Project – administered through a small grants programme for local NGOs – this could potentially support NGO-led activities in the project demonstration areas;
c. A tiger conservation programme managed by IUCN, International Union for Conservation of Nature, is being supported by EUR 20 million from the German government through the KfW Development Bank. The aim of the programme is to increase the number of tigers in the wild and improve the livelihoods of communities living in and close to their habitat. The five-year Integrated Tiger Habitat Conservation

[79] http://www.cites.org/eng/prog/mike/index.php ; http://www.elephantconservation.org/programs/archive-of-projects/cites-mike-programme-in-myanmar/
[80] http://globaltigerinitiative.org/

Programme will benefit NGOs and conservation authorities from selected tiger range countries which committed to doubling the number of tigers occurring within their territories by 2020. Eligible countries include Bangladesh, Bhutan, Cambodia, India, Indonesia, Laos, Myanmar, Nepal and Viet Nam.

d. The ASEAN Centre for Biodiversity (ACB) and KfW Entwicklungsbank have signed a EUR 10 million agreement to protect biological diversity in the ASEAN (Association of Southeast Asian Nations) region. As part of the small grants programme, it will support rural communities and non-government organisations in and around the ASEAN Heritage Parks. The project will initially focus on two parks in Indonesia and four in Myanmar.
e. Smithsonian Institute: development of a framework for monitoring biodiversity, including protocols, mechanisms and indicators;
f. WWF: general complementarity of programme interests with this project, including capacity building for SMART LEM at central PA system level, capacity development for PA management and sustainable land use, development of indicators for PA management minimum standards, support for data gathering for spatial planning including ecosystem services. There is significant potential to extend the project's approach to other regions of Myanmar and to add to its resources (through associated financing);

   FFI: ecotourism development at Indawgi Lake, possibly models that could be shared with the project?
g. FREDA: strong experience on community involvement initiatives in the Central Dry Zone and Ayeyawady Delta (not in the north of the country);
h. BANCA: Interested in supporting development of new PAs such as potential extension of Hkakaborazi including the Malika watershed;
i. Both the UNDP CO and NGOs involved in community participation, development and gender work, such as World Concern and local organizations, will be consulted as part of the project's community participation programme, and involved as appropriate. The very limited funds available for community livelihood and development work require the development of partnerships to achieve shared goals;
j. In addition, significant international GIS mapping and remote sensing analysis research by the universities of Maryland, Queensland and Singapore will be taken into account by WCS during project implementation.

ANNEXES

Annex 1. Myanmar Protected Area System Gap Analysis

See attached file

Annex 2. Capacity Development Scorecard for Myanmar PA System Agencies

See attached Excel Workbook

Annex 3. BD-1 Tracking Tool (METT and Financial Sustainability Scorecard)

The full Tracking Tool is annexed as an Excel workbook.

METT Section One Data:

Name of reviewers completing tracking tool and completion dates

	Name	Title	Agency
CEO Endorsement [October 2013]	U Maung Win, U Min Khine Oo,U Thein Lwin; U Saw Htun.	Warden Htamanti WS, Warden Hukaung Valley WS, Warden Hkakaborazi NP, WCS Deputy Country Program Director	Nature and Wildlife Conservation Division, Forest Department; Wildlife Conservation Society
Project Mid-term			
Final Evaluation/project completion			

Project coverage in hectares

Targets and Timeframe	Foreseen at project start (ha)	Achievement at Mid-term Evaluation of Project (ha)	Achievement at Final Evaluation of Project (ha)
Total Project Coverage			
A. Total Extent in hectares of protected areas targeted by the project by WWF Terrestrial MHTs			
Tropical & Subtropical Moist Broadleaf Forests	233,362,346		
Mangrove (subtropical and tropical, salt water inundated)	0		

B. Total Extent in hectares of protected areas targeted by the project by WWF Freshwater MHTs and Ecoregion(s)			
Tropical and subtropical coastal rivers	45,004		
C. Total Extent in hectares of protected areas targeted by the project by WWF Marine MHTs			
Coral reefs	0		

See separate file for the GEF sustainable financing scorecard.

Annex 4. Review of Policies and Legislation Relevant to the PA System

See attached file

Annex 5. Analysis of wildlife/forest crime and related law enforcement

See attached file

Annex 6. Site Profiles for Demonstration Protected Areas

See attached file

Annex 7. PA Stakeholder Workshop Reports

See attached files

Annex 8. Sustainable Financing

See attached files

Annex 9. Baseline SMART Analysis for Three Demonstration Protected Areas

See attached files

Annex 10. Community Participation Strategy

See attached files

Annex 11. Environmental and Social Screening Summary

See attached files

Annex 12. CSO Capacity Assessment for WCS

See attached files

Annex 13. Agreement on Cooperation between UNDP and WCS for Project Implementation